The Builder.

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FOR some time past, the whole weight of the business at the office of Metropolitan Buildings has rested on Mr. Hosking and the registrar (Mr. Symonds), in consequence of the retirement of Mr. Higgins. It was considered desirable, in making a fresh appointment, to stipulate that the new referee should undertake no other business; and this, it seems, has caused some delay. One architect of high standing, who was a candidate for the appointment, refused it when offered to him with the condition named, and the vacancy has only just now been filled up. Without any disrespect to the gentleman who succeeds him, we must express our regret that Mr. Higgins should have felt it necessary, so soon after the establishment of the office, to withdraw himself from it. Doubtless he found the post not an easy one; and we can well understand that, possessing a sufficient fortune (which all who know Mr. Higgins will say he has worthily obtained and richly deserves), he might feel disinclined to continue to perform its duties. For the sake of the public, however, we would have had him remain until the Act had been amended by the legislature, which will probably be done next session. As it is, we must simply offer him our best wishes for health to enjoy his ease, and express a hope that Mr. Hosking may find in his successor as excellent a colleague.

The mode of proceeding in the office has now taken a settled shape; and although there are points wherein alteration is desirable, must, in the whole, be considered as satisfactory as could be anticipated. The referees have shewn on several occasions that their chief office is to protect the public, and the two or three district surveyors who don't know how to behave themselves,—fortunately a very small minority,—have been properly punished in several cases, and so checked. The expense of application, too great at any time, is often increased by the want of precision and care on the part of the applicants themselves. We recommend such of our readers as have occasion to appeal to the referees to state their case clearly, and without verbiage, and to avoid unnecessary meetings and postponements, by which means the costs will be much lessened; but we nevertheless urge upon the referees the importance of an early revision of their scale of fees.

We have before us a number of awards and certificates recently issued by the referees, and proceed to lay the heads of some of them before our readers.

Timber in external Wall of House commenced before January last.—Mr. Martyr, district surveyor of Deptford, gave notice of irregularity to the owner of a house in St. Nicholas-street, Deptford, on the ground that when he surveyed it in January 1845, the front external wall was supported on a breastsummer and story posts, and that since then the owner had determined to make it into a private dwelling-house, and had filled in between the timber with brickwork, intending to compo the whole surface. The owner had, further, given no notice, considering that the district surveyor had no jurisdiction in the matter; but joined him in the application to the referees, in order that the question might be decided. The award was,—"That inasmuch as the house in question was commenced before the 1st day of January, 1845, and inasmuch as the works in question do not constitute an enlargement or alteration of the said building so commenced, and remaining unfinished at the time such works were executed, the said works are not liable to the provisions, rules, and directions of the said Act." The expenses to be paid by the district surveyor.

Approach to Stone Staircase in old House.—The builder of a stone staircase in a second-rate house in South-street, Park-lane (while in progress), contended that, as the house was an old one, he was not required to make the joists to carry the landings, and the other internal connections, fire-proof. The district surveyor, Mr. Foxhall, thought otherwise, and, mutually, they sent the case to the referees. The award was,—"That the stairs in question being of stone, the passage from the entrance-door to the side of the staircase furthest from the door must have its floor fire-proof, and wholly upborne and supported by fire-proof constructions, and also that the landings on the third or one-pair, and on the fourth or two-pair floors, connecting the flights of stairs between the several stories, must be also made fire-proof, and be wholly upborne and supported by fire-proof constructions." The expenses of the office, and one guinea to the district surveyor, to be paid by the builder.

Underpinning Walls adjoining a new Erection.—Mr. Winsland, the builder of a church to be erected in Upper Charlotte-street, Bloomsbury, having excavated the ground immediately contiguous to certain dwelling-houses and workshops, to a greater depth than the flank walls of the said houses and premises, underpinned the said walls along their entire length, but not to the full thickness of the said walls, nor to the full depth of the excavations adjoining them. On the information of Mr. Baker, the district surveyor, the referees went into the case, and determined that the underpinning was to be amended and altered in a substantial and workmanlike manner, throughout the full thickness of the walls in question, and to the full depth of the excavations referred to (or to such less depth as in the opinion of the district surveyor will meet the circumstances of the case), and conformably in every other respect to the rules relative to underpinning in sec. 28 of the Buildings Act. The expenses of the office, and a fee to district surveyor, to be paid by the builder.

Recesses in Party-walls.—Mr. Harding, of Deptford, being about to build a fourth-rate house in Rotherhithe, of which two side or external walls would probably be used at a future day as party-walls, asked the special sanction of the referees, to form four recesses in the basement story of these walls about two-thirds their extent, leaving nine inches at the back of the same.

The referees certified, that as the said recesses were proposed to be made in a party-wall, and in the first or basement story, and so that the back thereof would be nearer than seven inches from the centre of the wall, the same were contrary to the rules of the Act in schedule D, part 3, under the head "Recesses and Chases," and that they, the said referees, had no power to consent to or authorize the same.

Overhanging Roofs.—The builder of a detached house in Gloucester Road, Paddington (not sufficiently detached to render it "insulated" within the meaning of the Act), sought the permission of the referees to construct the eaves and cornice of timber, as was commonly done before the passing of the Act. The application was grounded on schedule F, describing projections from face-walls to be of such (proper and sufficient) materials as the official referees may approve and permit.

After considering the application, the referees certified, that inasmuch as the proposed eaves and cornice were not formed of, or efficiently protected by, proper and sufficient fire-proof materials, they could not permit them to be so constructed.

It may be well to remark, that the awards are necessarily influenced, at times, by circumstances which would not appear in short abstracts of the cases; we would suggest, therefore, that parties who find in any case reported in our pages a resemblance to their own, and would be guided by the award, should consult the whole of the documents connected with it; which may be done at the Metropolitan Buildings Office on payment of six-pence.

ARCHITECTURE—THE EXPONENT OF NATIONAL CHARACTER.

To few individuals does the term "architecture" convey any impression of its comprehensiveness, of the multitude, and apparently opposite nature, of its details. In its full extent, it includes the matter of every art, which ministers to the comfort, or to the delight of man, and in its service may be enlisted every variety of imaginative effort, and every form of mechanical skill. Dating its history from the age of the creation, it was the originator of all the arts, and throughout its after progress, the state of all has never been so felicitous, as when the connection, each with the rest, was intimate and mutually influential. All the forms in which the arts of design are expressed, with the operative skill ministering to, or associated with them, were once *one* art, and generally the pursuit of *one* individual. Every variety of building, every object of decorative art, every machine; works of construction, whether built upon the surface, excavated in the earth, or projected into the ocean; in fine, every work, almost, in which the caprices of fancy, or the demonstrations of science can be wrought into form, was once the offspring of one mind, and that mind the possession of the architect. If, in its more circumscribed aspect, architecture is the index to the modes of life, the condition and political state, and the scientific skill of different peoples, in its more comprehensive meaning, it is the embodiment of their thoughts and opinions, of their exact intellectual condition. It is the figure, in which the history of imperial sway is mirrored, for the perception of those, who are not blind to its instructive teachings. It is the voice of centuries past, speaking from the mist of unrecorded time, and the lamp, which illuminates the learning of one age to the contemplation of another.

Though the world has witnessed the prevalence of many modes in architecture, they are each highly expressive of the thoughts, and habits of their originators, and in some styles, the expression of those characteristics is so complete and evident, that we have considered, that some illustration of them would not be uninteresting. Merely referring to Egyptian architecture, as illustrative of the mysterious rule of a dominant hierarchy,* who succeeded in enslaving the thoughts of men, through the influence on the senses of a mystic ceremonial, in which the art played an important part; we pass to the style of the Roman empire. The architecture of Greece had borne the stamp of that refinement, which was the peculiar property of the Grecian nation; it was characterized by a noble simplicity of form, to which ornament was always held as secondary. Mouldings, whether ornamented or plain, were few in number, but arranged and proportioned with elaborate skill. Optical illusions were overcome by minute alterations, in the form and proportion, intentionally de-

* At p. 191, *ante*, are some remarks on this subject by the writer.

ceptive to the eye, and which long eluded the test of close examination, and measurement. Sculpture was called into exercise in an extent, and with a success, since unknown; and the subjects, which it illustrated were such, as brought the recollection of the beholder to the early history of his nation, and to the exploits of the deities of his country. The victory in the theatre, or the games, was commemorated in the monument, rather than the victory in the field of war. The Romans, subjugating Greece—struck with the beauty of its architecture, sought to transplant it to their own city. But with them, it was no longer the result of an accurate analysis, and balance of varying forms, and of their effect in juxtaposition, each upon the other. Not content with adopting the forms of Grecian architecture, and enlisting the services of its producers, they transported the buildings themselves to the capital of a subject world. Their earliest structures were in the main Grecian, and sometimes, as in the portico of the Pantheon, were very strongly expressive of that influence. But this comparative brilliant state of the art was of short duration, and soon the Grecian architects appeared to follow the blind dictates of a master, rather than the inward promptings of reason, and good taste. The national characteristics of the Romans—the love of empire, the pomp and vainglory of the triumphal spectacle; the pride of dominion, the opulence, the luxury, and the crime, changed the whole scope and expression of art; the orders of architecture became the mere framework for extravagant enrichments, annihilating the graces of form, and the happy arrangement of contrast, and exchanging the magic of art for the meretricious, and the grandiose. In the supplementary volume of "Stuart's Athens," Mr. Kinnard, speaking of the comparative merits of Grecian and Roman architecture, remarks that "the latter style corresponds with the ponderous bearing of a people, who had subdued the world by their arms; the former with the captivating influence of a nation, that had enlightened the universe by her literature." In Roman architecture, beauty disappeared under a load of riches. Mr. Gandy, in the "Pompeiana," says, "With the Greeks, architectural ornament may be compared with those parasitical plants, which, continually intertwining, climb to the tops of the loftiest trees, and pass from branch to branch without injuring the individual grandeur of character in the various species they embellish;"—"whereas, with the Romans, all distinction of surface was frittered away in an endless maze of fretwork." The love of splendour, identified with the Roman character, exerted its sway and the chaste principles of beauty, exemplified in the Pantheon, were no longer beheld during the pomp of the empire. "Another enemy to the beautiful, and even to the sublime," says Mr. Forsyth,* "was that colossal taste, which arose in the empire, and gave an unnatural expansion to all the works of art. In architecture, it produced Nero's golden house, and Adrian's villa; in hydraulics, it projected the Claudian emissary, and Caligula's Baian bridge; in sculpture, it has left at the capitol such heads and feet, as betray the emperor's contempt for the dimensions of man; in poetry, it swelled out into the hyperboles of Lucan and Statius. This exaggerating spirit spread even to the games. Nero drove ten horses yoked abreast to his car, and double that number appear on an ancient stone."

The distinctive peculiarities of national character are evident in every feature of Roman architecture: they are seen in the almost constant use of the Corinthian order, in the cornices, in which no moulding was without ornament, in the sculptured representations of triumphal processions, and in the construction of immense works for the amusement of the citizens. The cornice of the temple of Jupiter Tonans has a fillet, as the only unornamented moulding; in the arch of Titus the enrichment is of like extent; and in the temple of Jupiter Stator, and in other examples, hardly inferior. The triumphal arches, in every detail of ornament, record the purpose of their erection; they sustained the triumphal chariot of the victor, and shewed portions of the procession. At Baalbec and Palmyra, the resources of decoration were exhausted, whilst the works were of vast extent.—The amphitheatres are mementoes of Roman ostentation and cruelty; they are of great size, the Colosseum being large enough to contain seventy or eighty thousand people, and that of Verona, twenty thousand. They were of an elliptical form, and consisted of the arena, where the combats took place, and ranges of seats surrounding it, easy access to every part of which was gained by numerous passages, and staircases. The outside exhibited several ranges of arches placed one above another. The arena was surrounded by a wall, upon which was the podium, a kind of projecting box, generally highly ornamented; there sat the *editor*, the senators, the vestals, and the magistrates, attended by lictors, and seated in their curule chairs. There was also the suggestum, the seat of the emperor. The podium was never less than twelve feet high, but, as an additional security from the beasts, lattices and gratings were raised, and large rollers contrived, so as to turn, whenever an animal attempted to leap on to them. Afterwards trenches, or canals were dug round the arena. But beasts were not the only victims in the shows of the amphitheatre; slaves were matched against each other, and the Roman ladies were amongst the spectators of the sanguinary exhibition. The calling of gladiator at length became an honourable one, in which senators, and even women, were proud to enlist themselves. The Emperor Commodus was so often victorious in the arena, that he signed himself conqueror of a thousand gladiators. To how low an abyss of degradation must the empire have fallen, when these brutal spectacles became the favourite amusement of the nation. The Romans introduced them into whatever country they subjected to their dominion, thus we find amphitheatres at Rome, Verona, Pompeii, Pola, Nismes, Corinth, and other towns in Italy, Gaul, Germany, and Spain. But the most considerable of all was the Flavian amphitheatre at Rome, and its vast size merits the name Colosseum. It occupies an area of six acres, and was in height nearly 160 feet. At its dedication, in the reign of the Emperor Titus,* the number of beasts destroyed was, according to one author, nine thousand, and after the combats, water was introduced and a sea-fight commenced. The form of the edifice is that of an oval, of which the longer axis is 620 feet, and the shorter 513 feet. The seats are raised over the staircases leading to the several divisions; and it is to be remarked, that the utmost care has been taken to secure the facile egress of a large audience. The building was four orders in height, and there were eighty arches in each of the three lower ranges, the arches in the second and third range being once ornamented with statues. In the upper order of the exterior are blocks for supporting the poles, which sustained the cords of the velarium or awning, the supporting of which over so vast a space, was often a work of extreme difficulty. This awning was sometimes of the richest materials, as of purple spangled with stars. Stupendous as was the fabric, it was constructed from a part only of the materials of Nero's golden house, which was demolished by Vespasian, as too sumptuous for the residence, even of a Roman emperor. Six hundred years had tried its stability, when it suggested the well-known saying "Quamdiu stabit Colisæus, stabit et Roma; quando cadet Colisæus, cadet Roma; quando cadet Roma, cadet et mundus."

"Here (says Mr. Forsyth) sat the conquerors of the world, coolly to enjoy the tortures and death of men, who had never offended them. Two aqueducts were scarcely sufficient to wash off the human blood, which a few hours' sport shed in this imperial shambles. Twice in one day came the senators and matrons of Rome to the butchery; a virgin always gave the signal for slaughter, and when glutted with bloodshed, those ladies sat down in the wet and streaming *arenæ* to a luxurious supper. As it now stands, the Coliseum is a striking image of Rome itself; decayed, vacant, serious, yet grand; half grey and half green, erect on one side and fallen on the other, with consecrated ground in its bosom, inhabited by a bedesman, visited by every caste; for moralists, antiquaries, painters, architects, devotees, all meet here to meditate, to examine, to draw, to measure, and to pray."

Scarcely inferior to the amphitheatres were the magnificent thermæ, which were so numerous, and of such extent, as would defy credibility, did not the remains of those works at present exist. They included apartments for the purposes of the bath, halls for friendly intercourse, academies, theatres, and libraries. They often stood amongst extensive gardens, and walks, and were adorned with all the richness, which art could lavish. They were lined and paved with mosaic, or with marble stained in various hues, and were embellished with the choicest productions of painting and statuary. The life of the Roman citizen may be said to have passed within their walls, and they became a main cause of that enervating influence on the Roman character, which involved the empire in its decline and fall. But it is not meant, that pride of dominion and wealth were the only qualities which the Romans possessed; their skill in the arts of construction was shewn in the sewers, the aqueducts, and other great works, which secured the comfort of the inhabitants of each city, and which are entitled to our admiration. They, also, carried the influence of the arts to the very confines of the empire, and by the Emperor Hadrian, Athens was enriched with many important buildings.

Much of the effect of Roman ornament is lost by the confusion, and jarring of mouldings in immediate contact, profusely decorated. The art of sculpture has the same character, as that of architecture. Unlike the sculpture of Greece, where the simple beauty of the "human form divine" was held superior to any adornment, they arrayed the figure in all the trappings and insignia of office. Their national characteristics alike influenced both arts, and are proved by evidence more convincing than written history, the evidence of thought, of language speaking through the tongue of art. E. H.

* "Remarks on Antiquities, Arts, and Letters, during an excursion in Italy, in the years 1802 and 1803."

* How a good and humane prince could preside at the opening of an amphitheatre, and derive pleasure from the slaughter of men and animals, we leave others to explain; for ourselves, we are doubtful as to the truth of the received opinion. Possibly a Spaniard might not question it.

MODERN CHURCH ARCHITECTURE IN GERMANY.

THE following review of a recent work, derived from German sources, will serve as an exponent of opinion in Germany on the subject of style in church architecture. It will be seen that it is widely different from opinion in England on the same point.

Professor Semper, on the building of Protestant (Evangelic) churches—Uiber den Bau evangelischer Kirchen. Dresden, 1845, 8vo.

Under this title the Dresden professor has published a spirited and instructive little work, which is chiefly intended for developing and defending the principles, upon which his project for the rebuilding of the St. Nicolas church, in Hamburg, is based. It turns on the dispute between the adherents to the pointed arches and round arches style, and the author proves by a few concise (yet, as it seems to us, conclusive) reasons, that the former is not adapted by its extent to the wants of Protestant churches, destined chiefly for preaching — that it is incompatible with the erection of galleried churches (*emporkirchen*); that, in fine, this style has been wrongly called the exclusively *national-German*. The pointed arches style, he says—and this is the main feature of Professor Semper's work—has neither been invented, nor exclusively developed in Germany; Italy, England, and France have also adapted this style, each according to their own mind and genius, as the Germans have to theirs. This sort of architecture, therefore, is no more exclusively German than the Byzantine-Roman, to which German genius has as much impressed the stamp of national character as to the Gothic. Just the same as the Nibelungen is nearer to the German mind than the Titurel and the songs of the thirteenth century — the character of the style of round arches is more congenial to our times than that of pointed ones, which is nigh becoming antiquated. The former is more analogous to our scale of civilization, on account of the more varied elements it has received within its sphere, and its principles having attained a more perfect harmony, more analogous to our social condition, containing as it does a significative symbolism of the Christendom, which has come to us from the East, superstructed on notions of antiquity. Our churches

—says the author—have to be churches of the nineteenth, not of the thirteenth century; as in every branch of art, the artist has not to adhere to the works of a completely developed epoch, but rather to go back to the type, to the source, whence these artists also have received their impulse. The origin of all is the same, but the end and aim diversified according to the different epochs of history and art. The assertion raised on several sides, that churches and the church are not to be considered as a work for the present time, is based on a misconception, and implies either a condemnation of those patterns, which have been, after all, a product of their times; or an accusation of the present age, as one unholy and unsusceptible of true Christian devotion. This imputation, says our author, is not true, our century is not worse than the thirteenth(?). This proves, that our author has taken up the subject from varied points of view—and we shall find, that those discussions, which predominate within the whole of the present epoch, intrude as well on the neutral and peaceable department of art. Hence, therefore it seems, that the discussion on the pointed or round arches style will not be decided merely on artistic grounds, but other disparate predilections and tendencies will be called into aid for one or the other of the contending parties. The technical arguments of the author turn mostly on the necessity of galleries (*Emporen*); but this is not supported but by the topical advantages of the hearers during the sermon. The prejudice, however, against galleries is not an unfounded one, because the objection of their imparting to the churches a theatrical appearance, is not so easy got over. It may be further said, that the aim of a congregation is to exhibit by their very contiguity the image of internal unity and oneness; but churches constructed with galleries, impart to the attendance a character of separation and disunion. To construct a church affording an ample display for the oratorical power of the minister, build in the round arches style, without emporæ—this seems to us a scope worthy of a thinking architect. But if this be impossible on account of some artistic or acoustic inconvenience—still, the emporæ style of church-building is not to be neglected; they may be constructed as flat as possible, and the architect may endeavour by some clever combination of the area of the style of pointed arches, to accomplish some pleasing combination, for avoiding the above inconvenience of separating the congregation. J. L.

DECORATION OF THE NEW HOUSE OF LORDS.

As a constant subscriber to your valuable journal, the article headed "English Decorators of the New Houses of Lords," of course came under my notice, and has induced me to send you some information on the subject, knowing the able manner in which you at all times expose injustice and advocate the cause of the artist. I hope the press generally will come forward and expose the injustice the exhibitors at King-street bazaar have been treated with. I feel confident that the public are not aware of the system carried on, and the exposure may prevent others from experiencing the privation and difficulties many have already done. In the first place, it was understood from the notice issued by the commissioners, that none but practical workmen were expected to compete, as no premiums were offered, but the parties selected by the commissioners, if proved that they executed the works themselves, would be employed; and further, that other exhibitors who responded to their call were to be selected to assist those who were first appointed, giving the whole of the practical men a chance. Now, if the commissions had been open to shopkeepers or any one else, a tailor might have had specimens done by foreign artists, and competed, and there would have been a far greater number of exhibitors; few of the respectable masters attempted to send in specimens, although equally capable of contributing English or foreign works as Messrs. Crace, but they were more honourable, not attempting to oppose the working artist. But have they not as good a right as Messrs. Crace to a share, who have now the honour and profit the industrious and injured exhibitors ought to have had? is it because they can give credit and send in fifty or one hundred men without drawing cash? No one will venture to say these gentlemen can *execute* the works they exhibited and are now employed to perform.

Mr. Pugin says there is no native talent, and he is obliged to seek assistance from foreigners. Has he sought for it? if so, he would have found it. There are the Parrises, Trebleses, Goodison, Lamberet, Glover, Cutbush, Coulton, Elliott, Jones, Saddler, Lloyd and Rice, of the School of Design, who executed the arabesques for the Prince at the Pavilion, Buckingham gardens, and many others. Surely, some of these could be found capable of working out the designs of Mr. Pugin. Messrs. Crace are now doing the painting, gilding, pricking in colours, and arabesque decoration of the House of Peers, having artists at work at his shop upon the decorations, and yet Mr. Goodison was told there was no scope in the House of Lords for his talent, it was mere journeymen's work; then why should not the exhibitors have the benefit of this so-called journeymen's work rather than Mr. Crace. I well know that Mr. Goodison, and Coulton, and Elliott are practical men in all the branches, and if employed, could send in journeymen as well as Mr. Crace, yet none of the appointed can meet with any redress. Surely such things ought not to be allowed to continue, and I hope the public and press will raise their voice against it. Only put Mr. Parris's cartoon in the first exhibition, and his fresco in the second, in comparison with Mr. Crace's fresco of Henry VII., done by his foreigners, and I think you will say, and the public too, that Mr. Parris is as far superior to Mr. Crace as Raphael is to Parris. The fact is that most of the exhibitors have worked for Mr. Crace; Mr. Goodison, the best English decorator we have, worked for him for years, and of course is used to his style of work, but when he sent in specimens in opposition to Mr. Crace, his services were no more wanted. I do not mean to charge Mr. Crace with having injured any one, but two things are certain. He must either have great interest, or have spoken ill of the exhibitors. Mr. Goodison, Collman, and others already named, are as capable of carrying out Mr. Pugin's designs as any one that Mr. Crace has working for him, and they were specially appointed by the commissioners, therefore thought they had as good a right to a share as Mr. Crace. They consequently called on Mr. Barry for employment, but were politely bowed out with the remark that Mr. Crace was employed by Mr. Pugin, and he was not accountable for Mr. Pugin's acts. Goodison then wrote to some of the commissioners, but without effect, clearly shewing that they are a nonentity, as you will further see. If the work at the new houses had been given to the parties selected, all the exhibitors might have been employed, which would in some measure have repaid them.

Will not the public, if not the exhibitors, be astonished, when I tell them that the whole of the windows that are to be filled with painted and stained glass are given to Messrs. Ballantine and Allan, Edinburgh, *glass-cutters*, entirely through interest. The public are not aware of the trouble, difficulty, and the great expense of getting up stained glass: taking the exhibitors upon an average, the cost was not less than 50*l.* each. Six were officially appointed, of whom B. and A. were one, and who have now got the whole with no practical knowledge of glass painting. We shall now have foreign glass to decorate the new Houses instead of English; and I defy the commissioners to know but what it is done on the premises,—the tedious process and the quantity required could not be executed in the time: the commissioners are hardly aware that there are not many more than fifty journeymen *glass-painters* to be found.

I have been informed that the method pursued by the commissioners with respect to the carvers is not exactly as stated, but is as follows:—The commissioners were determined to employ none but good practical workmen, and to have the work done on the premises. Mr. Rogers is a dealer in carvings of good judgment, but himself a very poor hand; many of his works after Gibbons, being executed by Brown, stained, pickled, &c. &c., to give the required appearances. Those *practical* carvers who live in town, and were exhibitors, have met with employment. Mr. Nash, an exhibitor, although not appointed, is selected to superintend the works. Mr. Brown, one of Mr. Rogers' best men, and two or three others, whose names I forget, have appointments as foremen over certain departments, at a salary of 2*l.* per week. This is the only instance where the commissioners have given the exhibitors a chance: the same course ought to have been pursued with respect to the other works.

In conclusion, I hope the decorative artists and glass-painters will call a meeting, and, throwing aside the jealousies which now exist among them, unite together in a friendly and good feeling, to protect their rights and awaken the commissioners to their promise.

I am, Sir, &c., JUSTICE.

TIMBER TREES AND THE VEGETABLE WORLD GENERALLY.

THE study of the vegetable world is full of interest, and tends not simply to make better architects and builders, but better men. The phenomena which it presents, the adaptation of means to obtain certain ends, and the manner in which it affects and is affected by the animal world, fill the mind with astonishment, while by the contemplation of them our views are enlarged and corrected, and our capacity for the enjoyment of nature is increased.

The effect of animal respiration, as our readers know, is to vitiate the atmosphere by the absorption of the oxygen it contains, and the production of carbonic acid gas, which is fatal to life. How beautiful it is to find that the vegetable world is always acting to restore the atmospheric air to its original composition of twenty-one parts per cent. of oxygen, by the absorption of the carbonic acid gas and the liberation of oxygen. The leaves of the common lilac placed in a jar filled with atmospheric air will raise the proportion of oxygen to 29 or 30 per cent., and by introducing several plants into the same jar in quick succession, the proportion may be raised from 21 (the ordinary amount) to 39 per cent., thus almost doubling it. The presence even of a small moss in a vase in which fishes are kept, aids so considerably in maintaining the supply of oxygen necessary for their respiration, that it is not necessary to change the water so frequently as when no plant is present. The power possessed by plants of taking up carbonic acid gas seems analogous to that by which food is collected by animals; it is at first taken up more eagerly than afterwards; a keen appetite, it may be said, is in operation which flags when satisfied. It was formerly considered that this compensating action on the part of plants ceased at night, and that they also then evolved carbonic acid gas. A series of valuable experiments by Mr. W. H. Pepys, F.R.S.* has proved, however, that this is not the case. The proper action is accelerated by the aid of light but continues even during the night, although more slowly, and from healthy plants carbonic acid gas is never given off.

There is, nevertheless, one class of trees, the cypress, yew, cedar, and arbor vitæ, which, if they do not actually diminish the quantity of oxygen in the atmosphere (and this is not quite certain), at all events do not increase it. Dr. Dickson (of St. George's hospital) published an interesting letter last year on the trees and shrubs proper for cemeteries,† wherein he drew attention to the fact that the trees we have mentioned, "Dark trees, funereal, cypress, yew, and shadowy pine, and spicy cedar," which almost by prescriptive right are the occupants of the spots set apart for the dead, and give our burial grounds a gloomy and almost repulsive aspect, are precisely those that for the reason stated should not be placed there.‡

Dr. Young's sketch of the functions and characteristics of the vegetable world is concise, and may be usefully introduced here. He says:—§

"The vegetable kingdom presents to us a spectacle highly interesting by its variety and

* Published in "Philosophical Transactions" for 1843, p. 329.

† "Provincial Medical Journal," March 2, 1844.

‡ All these trees belong to one class, termed non-reproductive, because when cut down, no shoots spring from the roots. This was one reason why the ancients selected the cypress to plant by the grave, which to them was the end of existence. Viewed in this light it has been well observed, "the cypress is no meet emblem of a Christian's grave."

§ Lectures on Natural Philosophy and the Mechanical Arts," new edition, edited by the Rev. P. Kelland, M.A., Taylor and Walton, Upper Gower-street.

by its elegance; but the economy of vegetation appears to be little diversified, although little understood. With respect to the apparent perfection of their functions, and the complication of their structure, we may consider all vegetables as belonging to two principal divisions, in one of which the seed is prepared with the assistance of a flower, having its stamina and its pistils, with petals or a calyx; while in the other, the preparation of the seed is less regular and conspicuous, and hence such plants are called cryptogamous. In some of these there is a slight resemblance to the flowers of other vegetables, but on the whole, the class appears to form one of the connecting links between the three kingdoms of nature; its physiology is probably simple, but it has been little examined. The herbs, palms, shrubs, and trees, which constitute the numerous genera of flowering vegetables, exhibit the greatest diversity in the forms and dispositions of the organs of fructification, while they have all a general resemblance in their internal economy.

Every vegetable may be considered as a congeries of vessels, in which, by some unknown means, the aqueous fluids, imbibed by its roots, are subjected to peculiar chemical and vital actions, and exposed in the leaves to the influence of the light and air; so as to be rendered fit for becoming constituent parts of the plant, or of the peculiar substances contained within it.

The first process in the germination of a seed is its imbibing moisture, and undergoing a chemical fermentation, in which oxygen is absorbed, and a part of the mucilage contained in the seed is converted into sugar; a substance probably more nutritive to the young plant. The radicle shoots downwards, and the seed leaves, or cotyledons, which are generally two, although sometimes more or less numerous, raise themselves above the ground, till in a short time they die and drop off, being succeeded by the regular and more adult leaves.

In every transverse section of a vegetable, we commonly discover at least four different substances. The parts next to the axis of the tree or branch consist of medulla or pith, which is supposed by some to be the residence of the vegetable life of the plant; but a tree may live for many years after being in great measure deprived of its medulla. The pith is of a loose and light spongy texture; it sends a ramification into each branch and each leaf, where it appears to serve also as a reservoir of moisture. The pith is surrounded by the woody part, composed of fibres more or less strongly compacted together, but not actually ramifying into each other in any great degree, although there is reason to suspect some lateral communications between them. They are interrupted, at certain intervals, in many trees, by fibres, in a radiating direction, forming what is called the silver grain. Like the bones in animals, the wood constitutes the strongest part of the vegetable; and, like them too, it is in a certain degree furnished with vessels. It has even been supposed by some, that the fibres themselves are distinct tubes, and by others, that the insterstices between them serve the purpose of vessels, but neither of these opinions is at present generally received. The wood consists of a number of concentric layers or strata, formed in successive years; the external part, which is last formed, is called the alburnum, or white wood, and this part is the most vascular. The bark encompasses the wood; and this also consists, in trees, of several layers, which are produced in as many different years; the external parts usually cracking, and allowing us at their divisions to observe their number, the inner layer only being of immediate use. This layer is called the liber, and since this material was once used instead of paper, the Romans called a book also liber. The bark consists of fibres of the same kind as the wood, but more loosely connected. It is covered by the cuticle, which extends itself in a very great degree, as the growth of the vegetable advances, but at last cracks, and has its office supplied by the outer layers of bark. Between the bark and the cuticle a green pulpy substance, or parenchyma, is found, which seems to be analogous to the rete mucosum, interposed between the true skin and the cuticle in animals. Mr. Desfontaines* has observed, that in palms, and in several other natural orders of plants, the annual deposition of new matter is not confined to the external surface, but that it takes place in various parts of the plant, as if it were composed of a number of ordinary stems united together.

There are three principal kinds of vessels in the different parts of vegetables: the sap vessels, which are found both in the wood and in the bark, although their nature appears to require further examination: secondly, the air vessels, or tracheae, which are composed of single threads wound into a spiral tube, like the spring of a bell, and capable of being easily uncoiled; these, though they have been called air vessels, and supposed by some to serve the purposes of respiration, are described by others as containing, during the life of the plant, an aqueous fluid: and they are probably little more than sap vessels, with an additional spiral coat; they are not found in the bark, nor in all species of plants; and it has thence been inferred that they are not immediately necessary to the growth of the plant. The third kind are the proper vessels of the plant, which are generally disposed in concentric circles, and appear to be unconnected with the sap vessels, and to contain the milky, resinous, and other peculiar juices, which are found in different kinds of plants; for the sap is nearly the same in all, at least it is independent of the gums and resin, which often distinguish particular plants; it contains a certain portion of mucilage, and probably in some plants, as the sugar maple, a considerable quantity of sugar.

Mr. Mirbel* has also made a number of still more accurate distinctions respecting the structure of the different kinds of vessels. The circulation of the sap is not completely understood; when an orifice is made near the root of a tree, it flows most copiously from above: when near the summit, from below. Dr. Hope actually reverted the natural course of the juices of a tree, without changing its position; by inoculating a willow with two others, he completely united its existence with theirs, and then, removing its roots, he found that its vegetation was supported by the juices of the two others. A tree may also be actually inverted, and the upper part will strike root, the lower putting out branches and leaves.

Plants perspire very considerably, and also emit a quantity of gases of different kinds; they generate a slight degree of heat, which may be observed by means of the thermometer, and by the melting of snow in contact with them. The growth of every tree takes place at the internal surface of the bark, not only the bark itself being formed there, but the wood also being deposited by the bark; for Dr. Hope separated the whole of the bark of a branch of willow from the wood, leaving it connected only at the ends, so as to constitute a hollow cylinder, parallel to the wood; and he found that new layers were formed within the bark: and in another experiment a part of the wood, deprived of the bark, although protected from the air, was also covered with new bark as it grew over from the old bark above and below. The layers of wood, which are added in successive seasons, and keep a register of the age of the tree, are very easily observed when it is cut across; sometimes as many as 400 have been found in firs, and oaks are said to have lived 1,000 years.

Mr. Knight† has inferred, from a great variety of experiments, that the sap, either usually or universally, ascends through the wood into the leaves, and then descends through the bark to nourish the plant. The leaves seem to be somewhat analogous to lungs, or rather to the gills of fishes: for plants have need of air, and it has been found, that even seeds will not germinate in a vacuum. As the lungs of animals appear to be concerned in forming the blood, so it may be inferred from Mr. Knight's experiments, that the sap first ascends to the leaves through the external fresh wood or alburnum, and through the central vessels of the young leaves and branches, derived from the alburnum, and accompanied by the spiral tubes; and after being perfected by exposure to light and air in the leaves, it descends in the bark, and serves for the secretion of the alburnum, and of the internal layers of the bark, being conveyed probably by two distinct sets of vessels. The sap, thus prepared by the leaves in the summer and autumn, is supposed to leave its extractive matter in the tree throughout the winter, in such a state as to be ready to unite with the aqueous juices, which ascend from the root in the succeeding spring. The internal parts of the wood, having served the purposes of vegetation, are hardened, and perhaps dried up, so as to be afterwards principally subservient to strengthen alone."

Mr. Gwilt, in his "Encyclopædia of Architecture," has given much useful information on the subject of timber as used for building, already treated of at some length in The Builder.‡ We avail ourselves of a few notes from it.

"If the architect has the opportunity of selecting the timber whilst in a state of growth, he will, of course, choose healthy, vigorous, and flourishing trees. Those in which the trunks are most even are to be preferred. A mark of decay is detected in any swelling above the general surface of the wood. Dead branches, especially at the top of the tree, render it suspicious, though the root is the best index to its soundness. The notion of Alberti (De Re Ædificatoria) of using all the timber in the same building from the same forest, is a little too fanciful for these days, though we confess we have some misgivings in impugning an authority which, in most other respects, we are inclined to receive with the highest veneration.

In felling, not only the oak, but all other large trees, the great branches should be first cut off, so that the tree may not be injured or strained in its fall; and the trunk, moreover, must be sawed as close to the ground as possible. When felled, but not before, it is to be barked, trimmed of its branches, and left to season. Before, however, leaving it for this purpose, it is considered by workmen better to square it, which, it is thought, prevents its tendency to split. If to be employed for posts, boring it has been employed with success: but it is needless to observe, that in pieces subject to transverse strains such a practice is not to be spoken of.

The pieces selected for building must be chosen with the straightest grain; but there are pieces which are occasionally employed, as for knees and braces, wherein a curvilinear direction of the fibres of the timber is extremely desirable. It may, however, be generally stated, that, in the case of two equal-sized and seasoned pieces, the heavier is the piece to be preferred.

In oak, as in all other woods, the boughs and branches are never so good as the body of the tree; the great are stronger than the small limbs, and the wood of the heart stronger than all. When green, wood is not so strong as when thoroughly dry, which it rarely is till two or three years after it is felled. It is scarcely necessary to say, that, containing much sap, it is not only weaker, but decays sooner. It is weakened by knots, at which, in practice, it is found that fractures most frequently occur; and it is important to the architect to recollect that he should always reject cross-grained pieces.

PRESERVATION OF TIMBER.

The preservation of timber, when employed in a building, is the first and most important consideration. Whenever it is exposed to the alternations of dryness and moisture, the protection of its surface from either of those actions is the principal object, or, in other words, the application of some substance or medium to it which is imperviable to moisture; but all timber should be perfectly dry before the use of the medium. In Holland, the application of a mixture of pitch and tar, whereon are strewed pounded shells, with a mixture of sea sand, is general; and with this, or small and sifted beaten scales from a blacksmith's forge, to their drawbridges, sluices and gates, and other works, they are admirably protected from the effects of the seasons. Semple, in this work on 'Aquatic Buildings,' recommended, that 'after your work is tied up, or even put together, lay it on the ground, with stones or bricks under it, to about a foot high, and burn wood (which is the best firing for the purpose), under it, till you thoroughly heat, and even scorch it all over; then, whilst the wood is hot, rub it over plentifully with linseed oil

* Mém de l'Instit. i. 478.

* Bullet. de la Soc. Philom. No. 60. Journal de Phy. lii. 336. Anatomie et Physiologie Végét. 2 vols. Paris, 1815.

† His papers are in the Ph. Tr. 1795, p. 290; 1799, p. 195; 1801, p. 333; 1803. p. 277; 1804, p. 183.

‡ See series of articles by Mr. Wylson in Vol. II., and at pp. 13, 32, 86, current volume.

and tar, in equal parts, and well boiled together, and let it be kept boiling while you are using it; and this will immediately strike and sink (if the wood be totally seasoned) one inch or more into the wood, close all the pores, and make it become exceeding hard and durable, either under or over water.' Semple evidently supposes the wood to have been previously well-seasoned.

If timber, whatever its species, be well-seasoned, and be not exposed to alternate dryness and moisture, its durability is great, though from time it is known to lose its elastic and cohesive powers, and to become brittle, if constantly dry. On this account it is unfit, after a certain period, to be subjected to various strains; however, in a quiescent state it might endure for centuries. Dryness will, if carried to an excess, produce this category. The mere moisture it absorbs from the air in dry weather is not sufficient to impare its durability; so, also, timber continually exposed to moisture is found to retain for a very long period its pristine strength. Heat, with moisture, is extremely injurious to it, and is in most cases productive of rot, whereof two kinds are the curse of the builder, the *wet* and the *dry* rot, though perhaps there be but little difference between the two. They appear to be produced by the same causes, excepting that the freedom of evaporation determines the former, and an imperfect evaporation the other. In both cases the timber is affected by a fungus-like parasite, beginning with a species of mildew; but how this fungus is generated is still a *vexata questio;* all we know is, that its vegetation is so rapid, that often before it has arrived to its height, a building is ruined. From our inquiries on the continent, we believe the disease does not occur to the extent that it does in this country; a fact which we are inclined, perhaps erroneously, to attribute to the use of the timber of the country, instead of imported timber. Our opinion may be fanciful, but there are many grounds on which we think that this is not altogether the case. Our notion is, that our imported timber is infected with the seeds of decay long before its arrival here (we speak of fir more especially), and that the comparative warmth and moisture of the climate bring more effectually the causes of decay into action, especially where the situation is close and confined. Warmth is, doubtless, known to be a great agent in the dry rot, and more especially when moisture co-operates with it; for in warm cellars and other close and confined situations, where the vapour which feeds the disease is not altered by a constant change of air, the timbers are soon destroyed, and become perfectly decomposed.

The lime, and more especially the damp brickwork, which receive the timbers of a new building, are great causes of decay to the ends of them; but we do not think that the regulations of the 19 Car. II., chap. 3, which directed the builders, after the fire of London, to bed the ends of their girders and joists in loam instead of mortar, would, if followed out in the present day, be at all effective in preventing the decay incident to the ends of timbers. Timber in a perfectly dry state does not appear to be injured by dry lime, and, indeed, lime is known to be effectual in the protection of wood against worms.

Nothing is more injurious to the floors of a building than covering them with painted floor-cloth, which entirely prevents the access of atmospheric air, whence the dampness of the boards never evaporates; and it is well known that oak and fir posts have been brought into premature decay by painting them before their moisture had evaporated; whilst in the timber and pewing of old churches which have never been painted, we see them sound after the lapse of centuries. Semple, in his "Treatise on Building in Water" notices an instance of some field gates made of the fir of the place, part whereof near the mansion were painted, and had become rotten, while those more distant from the mansion, which had never been painted, were quite sound.

After timber is felled, the best method of preventing decay is the immediate removal of it to a dry situation, where it should be stacked in such a manner as to secure a free circulation of air round it, but without exposure to the sun and wind, and it should be rough squared as soon as possible. When thoroughly seasoned before cutting it into scantlings, it is less liable to warp and twist in drying. The ground about its place of deposit should be dry and perfectly drained, so that no vegetation may rise on it. Hence a timber-yard may be strewed with ashes, or the scales from a foundry or forge, which supply an admirable antidote to all vegetation. It is thought that the more gradually timber is seasoned, the greater its durability; and as a general rule it may be stated, that it should not be used till a period of at least two years from its being felled, and for joiner's work at least four years. Much, however, is dependent on the size of the pieces. By some, water seasoning has been recommended; by others, the steaming and boiling it; smoking, drying, charring, and scorching have also been recommended. The latter is, perhaps, the best for piles and other pieces that are to stand in the water or in the ground. It was practised by the ancients, and is still in use generally for the posts of park paling and the like.

In Norway, the deal planks are seasoned by laying them in salt water for three or four days, when newly sawed, and then drying them in the sun, a process which is considered to be attended with advantage, but it does not prevent them shrinking. Mr. Evelyn recommended the water seasoning for fir, but we incline to think that gradual dry seasoning is the best method.

Notwithstanding, however, all care in seasoning, when timber is employed in a damp situation it soon decays, and one of the principle remedies against that is good drainage, without which no precaution will avail. It is most important to take care that earth should not lie in contact with the walls of the building, for the damp is quickly communicated in that case by their means to the ends of timbers, and rot soon follows. No expedient to guard against this contingency is so good as what are called air or dry drains, which are areas formed by thin walls round the building, with apertures in the paving laid between them and the principal walls, so as to afford a constant current of fresh air. When the carcase of a building is complete, it should be left as long as possible to dry, and to allow to the timbers what may be called a second seasoning. The modern practice of finishing buildings in the quickest possible period has contributed more to dry rot than perhaps any other cause, and for this the architect has been blamed instead of his employer, whose object is generally to realize letting, or to enjoy occupation of them as early as possible. After, however, the walls and timbers of a building are once thoroughly dry, all means should be employed to exclude a fresh accession of moisture, and delay becomes then prejudicial."

NATIONAL ENCOURAGEMENT OF THE FINE ARTS.

We solicit our readers' attention to the following communication:—

Sir,—As her Majesty's Commissioners have postponed the exhibition of historical paintings in oil until 1847, and announced instead, that specimens of fresco painting may be sent to Westminster Hall in 1846,—but observe, *not for public exhibition*,—great uncertainty must now be felt by those artists who have, during the last three years, answered the call upon their profession by the royal commission. The object of thus submitting specimens of fresco can only be to obtain employment in assisting the few selected artists in the execution of their works. Now, it may fairly be asked, seeing that public competition in cartoons and fresco appears to be ended, what is to become of the talent and the time bestowed on innumerable experiments in the difficulties and vexations of fresco painting by the other competitors? Is it fair, is it just towards those artists (many of whom have distinguished themselves, although they be not among the selected few), to suffer this amount of talent to be useless?—for useless it must be, unless some method can be proposed to keep up their practice. Surely after the enthusiasm shewn by them in producing so many large works, at a great expenditure of time and money, something should be thought of. Are there no public buildings, no colonnades, no halls available in London, where frescos could be executed? If no better plan can be devised, wall can be built up, and painted on both sides.

Cannot the Government be induced to run up seven or eight hundred feet of wall, built upon public land, for this purpose, and inclosed with shed coverings, such as we constantly see erected for masons and workmen employed on buildings. Were accommodation thus provided for fresco painters, finer works would be produced than any we have yet seen, and no doubt most of the competitors would gladly avail themselves of the opportunity thus afforded. Artists have been so taxed in the late competitions, that it cannot be expected they could enter upon the further expenses of building wall and the proposed temporary coverings, paying also a rent for the ground, and all perhaps without a ray of hope that their efforts would be patronized as native efforts deserve to be. I do sincerely hope that the competitors will associate for the purpose of historical painting and the improvement of fresco practice, and, if possible, prevail on the proper authorities to grant them ground and materials for some temporary exhibition place, which may have the sanction and patronage of the Queen and the Royal Commission.

Many of your correspondents will be enabled by their experience to suggest improvements on this plan and the mode of accomplishing it; such information will be highly valuable, and assist materially the object proposed.

It is intended at an early opportunity to call a meeting of those artists who have competed in cartoons and fresco during the last three years, when some plan, founded upon the above suggestions will be proposed, and any information your correspondents can afford will be highly esteemed by, Sir, your most obedient servant, A Competitor.

Communications may be addressed to "B.", Institute of the Fine Arts, Newman-street, Oxford-street.

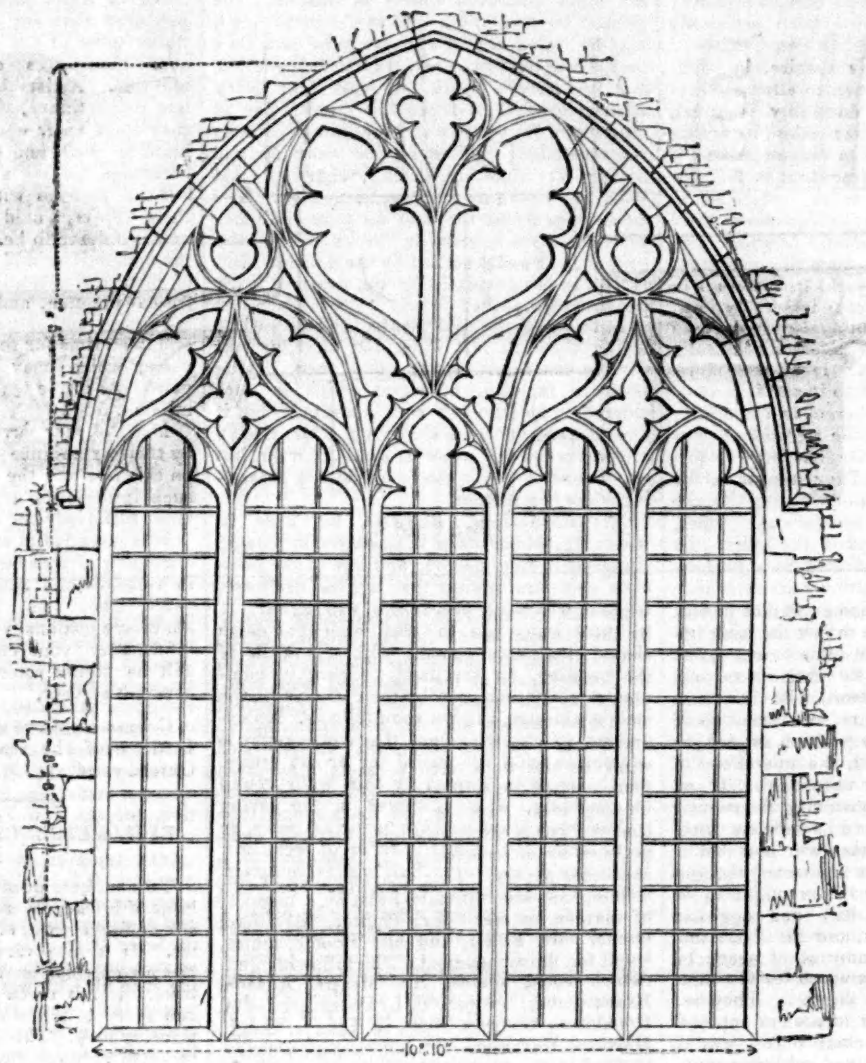
EFFLORESCENCE ON BRICK WALLS.

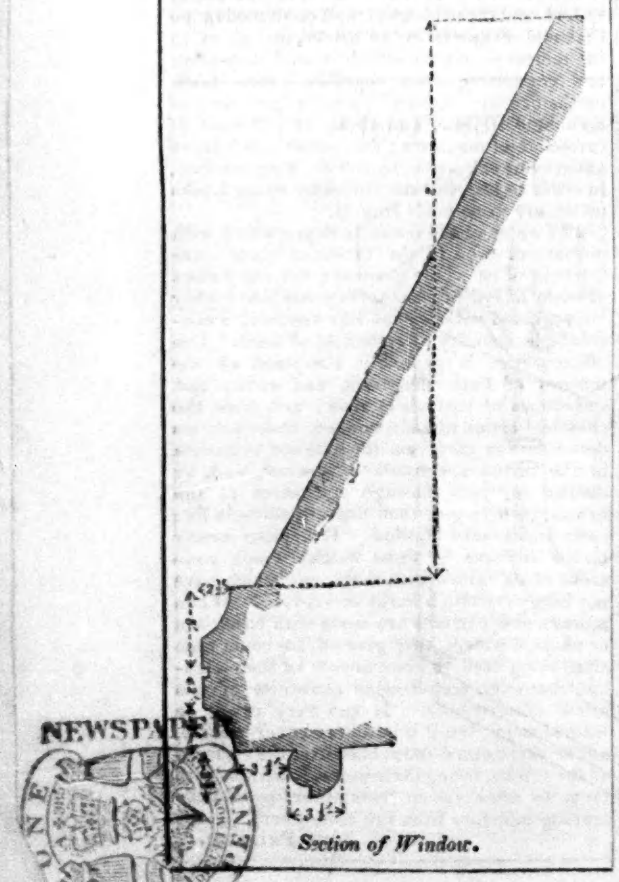
The surfaces of new walls, especially those built of bricks, are usually spotted with a white silky efflorescence, of a fine crystalline character. It is also very light and pulverulent; has a cool acidulated, or disagreeable alkaline taste. It has much the appearance of snow, and gives to walls a rather strange and unpleasing look. This flowery substance gathers on them very rapidly; but from being soluble, it becomes either melted or blown off by the weathering action of rains or winds; yet periodically accumulates again. This saline efflorescence is produced through a chemical affinity which subsists between the acids of the atmosphere, and the acids and alkali contained in the lime and magnesia in the bricks, as well as in the mortar or cement which is used in bedding and connecting them together. Most brick earths or clays contain about 5½ per cent. of carbonate of lime, and about 3½ per cent. of carbonate of magnesia; but sometimes a large quantity of calcareous matter or chalk is added, in order to improve the character of the bricks which are to be made from it.

The water of the ocean is impregnated with muriate of soda to the extent of about one-thirtieth of its whole quantity; and the waters of many of our mineral springs are also highly impregnated with it, and likewise with a considerable quantity of carbonate of lime. The efflorescence is generally composed of the nitrates of lime, magnesia, and soda; and sometimes of muriate of soda; and from the chemical action already noticed, these nitrates decompose or part from the lime and magnesia in the bricks and mortar or cement, and, by distillation, pass through the pores of the bricks, gathering on their exposed surfaces like spots and streaks of snow. It appears mostly on the surfaces of those bricks which have much chalk mixed with them, and which have not been very much burnt or vitrified. When mortars and cements are made with either sea or mineral waters, they give off, for some time after being used, in consequence of their alkaline character, considerable quantities of this saline efflorescence. It can very easily be washed away; but if it be allowed to crystallise, and be then heated and rubbed over the surfaces of the bricks, filling their pores, it will prevent them to some extent from attracting and absorbing moisture from the atmosphere.

John Phillips.

DECORATED WINDOW, ST. NICHOLAS', ISLE OF THANET.





WINDOW AND CAPITALS

FROM ST. NICHOLAS' CHURCH, ISLE OF THANET.

RICKMAN describes this church in the following words:—"It is a large church with a lofty embattled tower; most of the church is also embattled; some portions are early English, and there are some good decorated windows, particularly the east window of five lights."

To this slight notice much more might be added, but it will perhaps be sufficient to mention, that the church contains very excellent specimens of all the styles from Norman to perpendicular, and will be found well worthy of attentive examination. The subject of the illustration, fig. 1, is the east window of the chancel, already alluded to; it has five lights, and is of very fair design, its only fault being the meagre appearance of the mouldings. The illustration comprises an exterior elevation and the moulding of the jamb at large.

In this same church, there is a great variety of moulded and ornamented capitals to piers. Among the most curious are those represented by figs. 2 and 3, which are very excellent specimens of the transition from Norman to early English. The arch-mouldings and enrichments are also well worthy of notice, and are included in the illustration.

Margate. W. CAVELER.

ASSERTED ABUSES IN THE WESTMINSTER COURT OF SEWERS.

AT a court of sewers for the city of Westminster, held on Friday, the 5th instant, Mr. Allason proposed a motion for the adoption of an amended mode for the construction of sewers, the one in operation at present being *very deficient* for that purpose. At the same time he laid upon the table three diagrams of the improved mode.

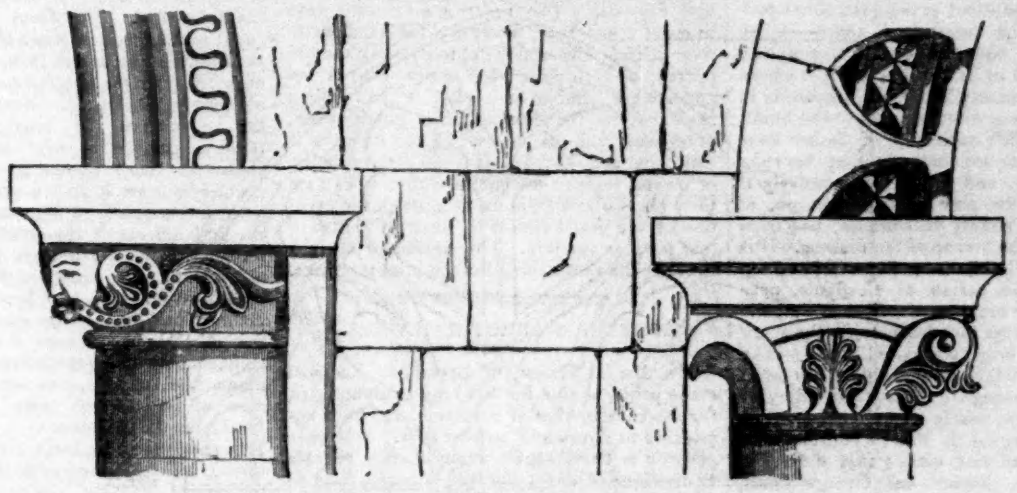
The court ordered that Mr. Allason's motion should be adopted, and that the diagrams should be lithographed and added to it.

The chairman, Mr. Edward Willoughby, rose and said, they had now come to that part of their proceedings which related to Mr. Leslie's pamphlet.* In this case, at the last sitting of the court, a letter had been submitted from the Secretary of State, requesting them to favour him with any observations they would wish to make against the allegations of abuses in this court. It appeared that it was his desire to hear both sides of the question. He (the chairman) did not propose to invite the attention of the court to the pamphlet itself, but he would suggest that a committee be appointed to draw up observations upon it, and report them, at its earliest convenience, to a future court. The remarks in the pamphlet travelled over a large period of time, going back to the year 1810, and from thence up to 1844. It was quite clear, therefore, that the committee would not be qualified to make those satisfactory inquiries which were needed, unless it contained in its composition some of those commissioners who took part in the proceedings of this court at that time. One gen-

* See p. 398, *ante*.

NEWSPAPER
BUILDER

NORMAN CAPITALS,—ST. NICHOLAS', ISLE OF THANET.



Figs. 2 and 3.

tleman who acted as chairman at that period, and would have been able to give the most important information on the subject, was unfortunately dead, but luckily there was still amongst them Mr. Donaldson, who had been their chairman for ten years, and there could be no doubt that from his position as such, he was more acquainted with the operations of this court than any other individual. It was obvious that any inquiry involving the regular practice of the court would be deficient without the aid of the chairman who presided at the time specified; he (the chairman) thought therefore, that Mr. Donaldson ought to be upon the committee. It had been suggested that the present chairman, and Mr. Harrison, the chairman of the committee of accounts, should also be on the committee for the same reasons, though in a less degree. They had assembled together for the purpose of appointing the committee, and their object was to have gentleman impartial and without prejudices; he would therefore further propose Mr. Alderman Johnson, Mr. Robert Gunter, and Mr. Hawkes, for he thought that those names were not at all open to any imputation or fear that they would not form their judgment with fairness, and he (the chairman) would feel very much pleased to co-operate with those gentlemen. His endeavour was to appoint such a committee as would carry out their duty with fidelity.

Mr. Gunter declined to act, his health not being sufficiently good to permit him to give the attention and application necessary for such an inquiry. All who are interested in the subject, and know Mr. Gunter's clear head and rigorous integrity, will regret that he was not induced to act.

Mr. John Gunter was then named, but was obliged to decline, as he was going out of town. Mr. Hawkes also wished to withdraw, on the ground that he was not in office at the time alluded to in the pamphlet. Mr. John White was requested to join the committee, but he thought he ought not to do so, as he had often expressed himself strongly against the proceedings of the court; afterwards, however, Mr. White consented to act.

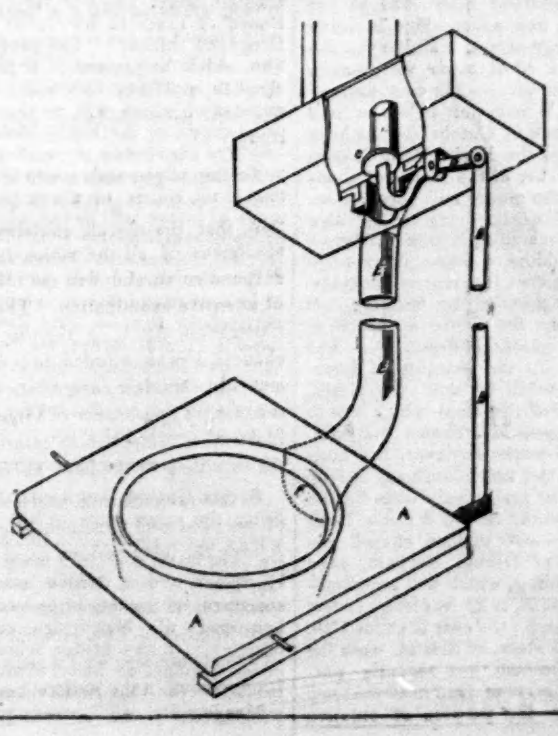
The following gentlemen constitute the committee as ultimately formed: — Mr. Willoughby, Mr. Donaldson, Mr. Harrison, Mr. Alderman Johnson, Mr. Hawkes, Mr. John White, and Mr. Frederick Crace; three to be a quorum.

On a notice being read of a motion to sanction an order of the court for building 450 feet of main sewer in Gloucester-road, Paddington, estimated at 1,237*l*. Mr. Leslie objected strongly to certain proceedings by which an amendment on this motion moved by him at the last meeting had been set aside. He also accused the court of levying a rate upon the public in order to make a balance in the hands of the banker and whilst, he said, there were 20,000*l*. in the bank, not a single public work was in hand. He objected to the abiding by the contract made for the building of the sewer, urging the inefficient manner in which the former part of the work had been completed as the reason why the engagement should be broken off. He then submitted an amendment to the effect, that the proposed work be not done until a carefully prepared plan, section, specification and estimate, including every expense, be made; and then that the works be thrown open to public competition by advertisement in The Builder and other papers. This was seconded by Mr. White, but was ultimately lost by a majority of sixteen to six. Mr. Gunter, Mr. John Gunter, Mr. Fuller, and Mr. Boodle, junior, voted for the amendment. The following gentlemen voted against it: Messrs. Allason, Branscombe, Cantwell, T. L. Donaldson, Wm. Donaldson, Walpole Eyre, J. France, Gutch, Hawkes, Harrison, Kendall, Lewis, Nutting, G. O. Smith, and the chairman.

SIMPLE SELF-ACTING WATER-CLOSET.

The poisonous effect of the effluvia arising from decomposing matter has been adverted to on several occasions in our pages. One regulation should be instantly enforced; every open cesspool at present vomiting forth its pestilential gases should be arched over,—no privies should be permitted,—and one fruitful source of disease would be stopped. We are indebted to Mr. Henry Austin, the excellent honorary secretary of the Metropolitan Improvement Society, and of the Health of Towns' Association, for the introduction of the cheap and efficient self-acting water-closet for poor tenements, represented by the accompanying engraving. The weight of the person sitting upon the seat A, forces upwards the rod B, and so causes the valve C, at the other end of the lever D, to close the lower aperture of the service-box, and to open the upper one, allowing it to fill with water. The pipe E is much larger than what is generally used, and the distributer F is so constructed as to preserve the whole force and velocity of the water. This arrangement has the advantage of being inexpensive, and not easily put out of order. A metal cylinder, 9 or 10 inches in diameter (in the place of a basin), trapped at the bottom in an ordinary manner, is all that is necessary to make a complete water-closet, requiring no care, and prepared for rough usage.

SIMPLE SELF-ACTING WATER-CLOSET.



WORKS IN THE PROVINCES.

The proposal to enlarge the parish churchyard at Gainsborough has led to another which has met with far more general approbation, viz., the formation of a cemetery. Two meetings have already been held on the subject, and there is little doubt but at the next, active proceedings will be determined upon.——The great "Peter" bell in York Minster is now safely suspended in its own tower. It is placed (at a height of nearly 200 feet) diagonally in the tower, for the greater security to the building, and above 300 cubic feet of timber have been used for its support. It may be rung with two wheels, and will revolve entirely if necessary.——The new district church, at Blaydon, in the county of Durham, has been consecrated by the bishop of the diocese. It is dedicated to St. Cuthbert.——Ground has been purchased in the parish of Bradpole, near Bridport, for the erection of a Roman Catholic church, and tenders for commencing the work forthwith have been advertised for.——The restoration of Sudely castle, which has been steadily progressing for some considerable time past is now nearly completed.——The tenders for enlarging St. Peter's church, Bedford, were opened last week; that of Messrs. Francis and Son, Taylor, and George Small, was accepted for the sum of 351*l*. The works will be commenced immediately.——At Bridgwater a Roman Catholic chapel is about to be erected. The site chosen is in St. John's-street.——Some pillars, and other remains of a Roman building, and two beautiful coins of the Emperors Antoninus and Domitian, have been discovered in High-street, Stamford.——At Hull, the Kingston Cotton Mill Company have procured a site for their intended works at Wincolmbe, on the west side of the river Hull. The purchase consists of upwards of twelve acres of ground.——The Government have it in contemplation to dispose of the prisons at Prince-town, Dartmoor. They cover a space of thirty acres, and during the late war 10,000 prisoners were lodged within them. ——The Rev. Hugh M'Neile has commenced the erection of a very spacious residence for himself and family at Aigburth, Liverpool. Messrs. Samuel and James Holme are the builders. No time has yet been fixed for laying the foundation stone of Mr. M'Neile's new church in the Princes-park.——The new church at Milton-next-Gravesend, an account of which has already appeared in The Builder (see p. 365 *ante*), was consecrated last week by the Bishop of Rochester. It is dedicated to the Holy Trinity.——The clearing of a site for the proposed Free Church College, Edinburgh, has involved the removal of an extensive cluster of houses, mostly of great antiquity, situate between the Castle-hill and the head of the Mound. This range of buildings includes the palace and chapel of Mary of Lorraine, widow of James V., and queen-regent of Scotland from 1554 to her death in 1560. A new police-office is being erected in the High-street, Edinburgh, the design for which a local paper mentions in high terms of approval.——The first stone of a new church at Winchester is to be laid during the first week of October by the high steward of the city, the Right Hon. Charles Shaw Lefevre, Speaker of the House of Commons, assisted by the mayor and corporation. ——The Rev. H. Fardell having at his own expense restored the south porch of Wisbeach Church, the parishioners have determined upon defraying the cost incident to the restoration of the other parts of the building. It is proposed to bring the fabric as nearly as possible to its original condition.—— The monument erected by the Marquis of Lansdowne on Cherhill-hill is now completed, with the exception of the steps which are to surround its base.——Mr. James Simpson, the eminent water-works engineer, has been in Newcastle and the neighbourhood during the last week, taking preliminary steps for the execution of the works of the Whittle Dean Water Company.——A wooden chapel was opened last week at Hinton Dyrham, near Bristol. The building, which will accommodate about 150 persons, is 27 feet long, 18 feet wide, and 14 feet high: the cost is about 150*l*. Messrs. Foster and Mees, of Bristol, were the builders.——Government has recently purchased twenty-one acres of land near the town of Tipperary, for the purpose of erecting barracks to accommodate 2,000 soldiers. They are intended for a general army depôt in that part of Ireland.——The old abbey church at Dunfermline is about to undergo a complete renovation. Mr. Nixon, the crown architect for Scotland, has recently inspected the building by order of the Commissioners of Woods and Forests. The result is a determination to erect a new roof, to restore the windows to their former size and style, to beautify the old pillars, and to give the entire church an appearance similar to what it had when Malcolm, its founder, and his good queen, Margaret, trod its aisles. The expense is estimated at 2,000*l*.——It is the determination of several railway companies whose lines pass through Wolverhampton, to unite in the erection of one grand station as near the centre of that town as possible. The bottom of Queen-street is the spot named for the joint terminus.

JOTTINGS ABOUT RAILWAYS.

Mr. De La Haye, of Liverpool, has just made public a plan he has long contemplated for the construction of submarine railways applicable to rivers and narrow seas. His proposition is to construct wrought-iron tunnels in divisions of about 400 feet in length, and to place them on the bed of the sea. He submitted the idea and its details many months since to Sir Joshua Walmsley and Mr. George Stephenson, and in all probability it led to the project of the latter gentleman to cross the Menai Straits by means of a suspension tunnel. ——Amidst the many projects connected with railways, we find one now in course of adoption for the establishment of a club-house in London, where gentlemen of all ranks may daily meet for the interchange of railway information. A mansion has already been taken at the West End. Another project of a similar character is an attempt to form a Railway Club-house Chambers and General Goods Depôt Company, the object of which is to provide a suitable fire-proof building for the general concentration of railway business, a portion of which to be converted into a commodious commercial club-house for the resort of directors and shareholders, a large hall for the holding of general and other meetings, suites of private offices for railway companies, and an extensive range of warehouses for the reception and transit of goods. The proposed capital is 300,000*l*. ——A preliminary announcement has been issued during the past week to the effect that a company is in course of formation with the object of establishing a complete system of telegraphic communication, connecting the metropolis with the different ports and cities of the kingdom by means of Messrs. Cooke and Wheatstones patent.——The battle of the gauges is not likely to effect railway interests in Ireland. The 5 feet 3 inch gauge is the one universally adopted there. It was recommended by the Board of Trade in the case of the Dublin and Drogheda railway. The gauge of the Ulster line, which at present is 6 feet 2 inches, is about to be altered to the above standard, the expense of which will be shared in equitable proportions by the lines running northward. ——The conversion of canals into railways is becoming so general, as to leave little doubt that in the course of a few years the former mode of transit will be entirely destroyed. A group of canals having at one of their extremities the Chester and Birkenhead railway, and at the other the London and Birmingham, are to be converted into one extensive London and Birkenhead line.——The Kennet and Avon canal is about to merge into the London, Newbury, and Bath direct railway. Mr. Blackwell and Mr. Maclean are the engineers. This conversion will be effected for about 414,800*l*., or about 7,500*l*. per mile.

Stone Bridge over the River Taff.—Since the appearance of the article on this bridge which appeared in last week's Builder, we have learnt that in consequence of the inconvenience and danger attending the old structure, the owners of property in the neighbourhood of Newbridge contemplate the erection of a new bridge below the site of the present bridge, so as to afford better accommodation for that rapidly improving and populous locality.

ARCHITECTURAL PRIZES IN ROME.

Rome, 21st August.—The Papal Academy of Arts *San Luca*, whose chair had been once filled by Thorwalsden, has proposed several great prizes, open to artists of all *nations* (and of all *confessions*). Those of *architecture* are the following. *First class.* Plan of a splendid royal residence in a large city. Its chief apartments to be hall of throne, chapel, library, museum, theatre surrounded by saloons, all adequately decorated. Besides, the building has to contain the usual *apartments* of a royal abode, for the cold and warm seasons (both the latter on the first floor). On the ground floor are to be the offices, guard-rooms, bath, kitchen, and in the *entresol* quarters for the high officers of the court. The place for stables and the servants is also to be marked out. Before the palace a large square, with monuments of the two preceding monarchs. Behind the palace, the gardens with appropriate buildings. There are to be *seven* designs accompanying this prize—*viz.* two ground plans, two sections, two elevations, and one view of any chosen part of the building. Each plan 0,840 metres by 0,576. *Second class.* Entrance gate of a large metropolis (not fortified), with adjoining edifices for the porters; the excise and the police soldiers (!) The gates to have three passages, for elegant curricles, waggons and carts, and beasts of burthen. The room for the guard is to be calculated at twenty privates and one petty officer. The officers on duty to have an orderly room, a dining and sleeping room. There is to be another guard-house for a detachment of cavalry with dwelling for the officers, prison, stables, and other appurtenances. The excise department to comprise a public office, dwelling for two superior and two inferior officers, a barrack for two detachments of troops, foot and horse soldiers, a guard-house properly so called, stables, and other appurtenances; prison, stores for smuggled and seized goods, a place for the strict examination of the vehicles, room for porters, and a waiting-room, also a dwelling for the porters. The police has a room for the revision of the post (!!!) Another place for the searching of persons and goods, a prison for both sexes separately (!), also a dwelling for the officers of police. This prize is also to be accompanied by seven plans, *viz.*, one ground plan, one plan of the upper rooms, two prospects taken from the inner and outer part of the town, one longitudinal section, one transversal section, and one plan of miscellaneous details. Size of plans as above. The competitors have to transmit their works to Mr. Silvagni, secretary of the academy, on or before the 20th July, 1846, under the usual formalities of prize competitions. The prices of the first class are forty, those of the second twenty zechins. The crowned plans are property of the academy. [As an English artist has met with such success in the competition for the Hamburg great prize—we consider it expedient to make known the above prizes, open to all the world.]

J. L.

ART-UNION OF LONDON.

In the three weeks ending Saturday last, during which the prizes were exhibited to the subscribers and their friends by tickets, 150,000 persons visited the gallery. During the present week, it has been open to the public without any limitation.

On Monday the works of art become the property of the various prize-holders and will be removed to their several homes. If the Art-Union of London did nothing more than provide this annual enjoyment for all classes of the community, it would be entitled to our gratitude.

The distribution of the outline illustrations by Mr. Rimer, of Thomson's "Castle of Indolence," due to all subscribers of the past year in addition to Doo's fine print of the "Convalescent" after Mulready, which is nearly ready for the press, commenced on Monday. They form an interesting series, and are likely to be popular.

Holloway, of Bedford-street, Covent-garden, has published at a low price, a very beautiful edition of the text, with additional illustrations by the same artist.

COURSE OF STUDY IN THE SCHOOL OF DESIGN.

Sir,—The publication of those designs for which premiums have been awarded by the School of Design, is certainly the best way to enable the public to come to a right conclusion as to the capacity of the masters, their mode of instruction, and the progress made by their pupils. The public are certainly indebted to your paper (No. 135), for giving them so practical a proof of the incapacity of the masters, the little progress made by the pupils, and the wretched designs. *The Illustrated London News* has published several of these premium designs, and if we except some few sketches made by the female pupils, whose innate taste for what is elegant and beautiful enables them better to skip over the stumbling blocks placed in their way, the whole of them are of the same indifferent character.

You must be aware, Sir, that if the School of Design had proper masters—those who were able to illustrate the first principles of design on the black-board (the only way by which any great body of pupils can be taught)—the authors of such designs would get more kicks than halfpence.

You know that I have no connection whatever with the School of Design, and that what I have stated is an unbiassed opinion. I have had great experience in teaching youth, and I know it requires the unwearied attention of the most able masters to ensure the slightest success.—I am, Sir, &c., M. I. B. A.

*** We have refused insertion to several letters on this subject in favour of the management, because they throw no additional light on the question; and we must pursue the same course with those of its opponents. We have received another communication from Mr. R. Burchett, but for the above reason do not print it. As regards the present condition of the school, he says:—

"In March, 1843, the last month of *Mr. Dyce's* directorship, there were in the evening school, as entered in the Register of Attendance kept in the school, 220 students.

In the same month, March, 1845, after two years of *Mr. Wilson's* directorship, with the lure of 200 guineas then forthcoming for prizes, the number in the evening school was 210, being a decrease of 10; and in July last, at the time of the private pic-nick exhibition of productions—so desperately forced and fudged up for the occasion—the evening school consisted of no more than 114;—shewing a falling off of 106!! from the number in the evening school at the time Mr. Dyce was forced by persecution to leave the institution. There is no denying these facts. They can be verified by any student in the school."

BOOKSELLERS' PROVIDENT RETREAT.

On the 4th inst., the first stone of a structure for the reception of aged and infirm persons who are members of the Booksellers' Provident Institution, was laid at Abbot's Langley, Herts, by the Earl of Clarendon. The situation is beautiful, overlooking the London and Birmingham Railway, and the interesting old church described in last week's Builder. The structure is to consist at first of seven houses, after a design in the early English style of architecture, by Mr. Cooper; and, in addition to the dwelling apartments in the central house, there will be a large room for the use of the committee, and a commodious hall as a place of general meeting for the inmates, which is also to be fitted up as a library.

We have not seen the design; some who have, speak badly of it.

ST. JAMES'S CHURCH WINDOW.

We learn that the committee have sent special instructions to Mr. Wailes that he is to take out of his design *every thing Gothic*. As well might you tell a man who brought you a French book when you wanted an English one, to take out of it every thing French. The window is essentially Gothic,—*wholly* Gothic, and no alteration can possibly fit it for St. James's church. Can nothing be done to induce the committee still further to modify their original determination, and so avoid the lasting annoyance they will otherwise lay up for themselves? They *know* they are in error, yet fear to retrace their steps.

EFFLUVIA FROM SEWERS.

Sir,—It is with great pleasure I peruse your continual advocacy of that necessary and essential requisite for the health of towns, namely, proper and sufficient, as well as systematic ventilation; there however appears to me one grand thing yet wanting, to provide a more cleanly, wholesome, and unvitiated atmosphere *without*, the consideration of which I shall but slightly discuss in my present letter; but as soon as I shall be in possession of the requisite statistical data, I will enter more fully into the consideration of this important subject, a subject becoming every day more interesting, as the present system of sewerage and drainage becomes more extended or improved.

The powerful and requisite enactments contained in Lord Lincoln's Bill for "Improving the drainage &c., of towns," I need hardly quote, having already been conspicuously before the public, and most ably commented on by the different journals; suffice it to say, the more such measures are enforced, the more favourable will be the result of the plan I am about to propose.

It is quite unnecessary to remind any person accustomed to traverse the streets and alleys of this great metropolis, more especially the confines of the city, of the nauseous and offensive gases and effluvia, continually arising from the "gulley-holes" and other openings connected with the sewers; and to such an extent (especially before heavy rains) do these gases and effluvia arise, as to be perfectly visible under the form of a vapour, causing epidemy and not unfrequently the worst symptoms of malaria in the immediate neighbourhood. What I would venture to propose is as follows:—"Let every man-hole, gulley-hole, or other open communication with the sewers be trapped, so as effectually to prevent any effluvia from arising therefrom; but in order to get rid of the effluvia, which must necessarily arise from the vast accumulations in sewers, I should propose the erection of columns at large thoroughfares, or grand connections of sewerage (carried to a height above that of the surrounding neighbourhood), which are to be connected with the sewers, and let the gases which arise either be consumed by fire at the top by jets of gas, or be carried away by the influence of the atmosphere. I have thus briefly brought before your notice a plan, which I am confident, if brought fully and properly into operation, would greatly benefit all classes of the community, and cannot see any difficulty in the plan (saving the expense), as the all-powerful Commissioners of Sewers have power granted them "to take any property, upon proper compensation, that may be deemed desirable for the improvements in sewers, &c.," added to which, these erections of columns might be turned to a variety of useful as well as ornamental purposes the consideration of which will form a part of my next letter. J. L.

151, New Bond-street.

New Buildings on Hampstead Heath.—Sir Thomas Maryon Wilson having determined upon erecting a number of villas on Hampstead heath, the ceremony of laying the first stone was performed last week by his sister, Mrs. Drummond, in the presence of a large party of friends and a considerable number of the inhabitants. The new buildings are to be distinguished by the name of "East-park." Mr. Gwilt is the architect, and assisted at the ceremony. It is *said* that East-park will not in any way whatever encroach upon the heath, or any of those portions of Hampstead to which the public are in the habit of resorting for recreation.

Fatal Accident in Sinking a Well.—Accidents frequently occur to persons while employed in digging wells; sometimes through the gross ignorance or carelessness of the operative, at other times through the false economy of the master in not allowing sufficient timber to span the work securely. A case occurred last week at Whitechurch, near Charmouth, when a poor man while pursuing his labour, was buried under upwards of ten waggon loads of soil and stones. Assistance was instantly obtained to extricate him, if possible alive, but the attempt was ineffectual; there is no doubt that he met with instant death.

THE FRUGAL INVESTMENT ASSOCIATION.

The first subscription meeting of the shareholders in this association was held, pursuant, to public advertisement, at the Hall of Commerce, Threadneedle-street, on Tuesday afternoon, the 2nd inst. The meeting was very numerously and respectably attended. The president, Mr. John Neale, took the chair, and Mr. Edward Smith, the solicitor, explained the principles and proposed advantages of the association. It is based upon the provisions of the Friendly Societies, Act 4 & 5 Wm. 4, c. 40, and contemplates the following objects:—

1. Investment of capital in 100*l.* shares, payable by monthly instalments of 1*l.* per share. 2. Pecuniary advances to the members (only) on mortgage of real or personal security, or both, accompanied by a life policy of assurance, they paying a redemption or anticipating fee of 8*s.* per share per month. 3. The advance of the whole 100*l.* on each share to those members who anticipate the discount or bonus:—that is, the amount agreed to be sacrificed by the member upon his share, as the competition bidding is not deducted from the 100*l.* all at once (as in the case on a sale of shares in building societies), but is spread over the whole period of the association by equal monthly instalments. 4. The certain termination of the society at the expiration of eight years and four months. 5. An annual division of the profits in which both borrowers and capitalists, namely both classes of the members, participate, so that the borrower is not prejudiced as such by availing himself of the society's pecuniary resources by anticipation. Various questions were asked by the gentlemen present to elicit further explanation, and several hundreds of the shares (which are limited to 2,000), were then taken, and the first monthly subscription of 1*l.* per share paid thereon. The next monthly subscription meeting was announced for the 2nd Tuesday in October, at the same place.

FREE ADMISSION TO PUBLIC BUILDINGS.

We mentioned a fortnight ago, that a memorial had been forwarded to Sir Robert Peel, from Lincoln, praying him, in the appointment of the new dean, to have regard to the free admission of the public to the cathedral.* One of the parties to the petition has received a note from the premier, acknowledging the receipt of the memorial. Sir Robert concludes his letter with the following sentiment:—"It will be gratifying to Sir Robert Peel if the Dean and Chapter of Lincoln shall be enabled to give the same facilities for free admission to the cathedral which are given at Westminster and Durham."

Relative to the insolence of the verger at St. George's Chapel, Windsor, alluded to on a former occasion, we have received a letter of thanks from an influential inhabitant of the town for the reproof of this man's conduct. His incivility, it seems, is complained of on all hands. We shall pay him a visit before long, for the express purpose of observing his behaviour, and shall hope, if only for his own sake, to find an improvement.

From Paris we learn, that the Prefect of Police, having discovered that money was exacted from the persons who came to view the different parts of the Pantheon by the parties who are paid for taking charge of it, has interfered, and insisted upon this abuse being ended.

Calcutta Cathedral.—From a statement put forth by the committee, we learn that this cathedral, of which the model is now on view at Guildhall, is 248 feet long, 116 feet wide at the transepts, and 206 feet high from the plane of site. It is further intimated that the whole body of the building, with the tower and spire, is erected, and that the roof is on, but that the internal fittings are yet unfinished. The choir, for the performance of divine service, is 131 feet by 61, and 47 feet high—spanned by an iron trussed roof, and capable of containing 1,000 persons. It is expected that the consecration will take place at the close of next year, or very early in the following, should the state of the funds admit.

* P. 415, *ante*.

THE SECOND ARCHÆOLOGICAL MEETING AT WINCHESTER.

The second division of the Archæological Association have met in great strength at Winchester during the past week. Lord Northampton it seems came from abroad to preside, and was supported at the opening meeting, on Tuesday, by Lord Ashburton, Sir Wm. Erle, the Count Mortara, the Right Hon. Shaw Lefevre, Sirs J. Boileau, S. R. Glynne, M.P., Wm. Heathcote, M.P., and R. G. Simeon, Barts.; Sir Richard Westmacott, Knt.; the very Rev. the Deans of Westminster, Winchester, Ely, and Hereford; the Revs. the Master of the University and Warden of New College, Oxford; the Warden and Principal of St. Mary's College, Winchester; the Master of Trinity College, Cambridge; A. B. Hope, Esq., M.P., J. B. East, Esq., M.P., E. P. Shirley, Esq., M.P., General Frederick, Colonels Vandeleur and Colville; Captain Pearson; Revs. H. Addington, J. G. Bedford, F. C. Blackstone, Dr. Bliss, &c.

On taking the chair, the president said, "Archæology had been justly called the handmaid of history; without it history would have been little more than a skeleton—it re-animated, as it were, the marrow, the bones, and the colours of life itself. Without the discovery of antiquity history would have failed to guide the path of the statesmen of former times. They must consider those changes which time and the progress of human ingenuity had produced. He understood that a notion had been entertained that this meeting was in some degree a political meeting; but such a proposition was so truly absurd, that he thought he was not called upon to deny it. It had also been supposed that this meeting was of a polemical character—a supposition not founded in fact. When he saw himself surrounded by so many ornaments of the church of England, and in the midst of such ecclesiastical monuments, which adorned a city that boasted of William of Wykeham, as the founder of its college, and the church of St. Cross, it was evident that it was not for the discussion of any polemical subjects that they were now assembled. If there was a difference among the members of the established church of this country, however deeply it was to be lamented, that was a circumstance with which the society had nothing to do. All it called upon its friends to do was to join with them in lending their aid to maintain those sacred edifices dedicated to the service of God. Although they had met together on the present occasion for the consideration of archæological subjects, still there was no reason why they should not discuss the wars of the roses, while they abstained from discussing the religious differences of the nineteenth century. With these differences the society had nothing to do. It was not its province to revive any unfortunate differences which might have arisen amongst archæologists. It stood by itself on its own merits, but holding out the hand of fellowship and friendship to every man who was willing to join its ranks.

The Dean of Westminster read an able paper in defence of Archæology. The antiquary was looked upon by some as at best a harmless creature, and to a certain extent the reproach and ridicule thrown upon him may have been deserved. How this had arisen they might inquire hereafter, but at present they would turn to other matters. They would look to the noble fellowship of bygone ages, which had made them what they now were, a link in the golden chain from the beginning to the end. Time had been likened to an old beggar putting good deeds into his wallet. They would look with earnestness and love into the wallet to see what those good deeds really were, and how brought about. This, then, was their purpose, to reproduce old times, watch with care over them, as a witness of that which was and is not; not considering the dust as precious as the writing it bore, but setting upon it a true value; with a scrutinizing, but no irreverent eye, to open the barrow, the monument, and ancient grave, linger over their words and deeds, of the thoughts they were thinking, and help us to reconstruct the busy active past—thus linking past and present. The history of the past exhorts all to venture on like noble deeds. Marathon, Thermopylæ, Agincourt, Trafalgar, the bowmen of Henry V., and Nelson's sailor, alike made example, and said, "Thou art the child of brave men, who never feared, never yielded;" who would say, "Kill me, but I never will be a slave." Come what danger there will, he was prepared to meet it. But there were also peaceful bonds—one language, one common history, one birthplace, were the sinews that bound the past to the present. There were the seed and the bud, the virtues and the vices. We must know our father lives ere we can live. Without the past there is no future. We see this even in infancy; to its unformed age all is present. It has no future till it has made a past, and it is on the mouldering monuments of antiquity making our past that we must build our future. The man who is a trifler in antiquity would be a trifler still did his mind take any other turn. Servile he must have been whether he gathered rusted coins, or, being a bookworm, became a mere pedant. There are those who, while ages have rolled away, would cling to their forms, but the spirit having left them, we cannot go back to them; we maintain there is a life in the past and in the present which have linked them to each other. These false claimants deny faith in the present life—they point to the liberality of former times, and will not allow we have the same quickening spirit within us now. They would make us unreal; they would dress the old man in the clothes of his childhood, thinking with such would come back the joyous days of youth. How unlike the spirit of one of those revered ancestors who, if he could rise up among us, would feel compassion for such a one, who could degrade the man to the mere outside shell. We see in the arrangement of churches much to love and study in their minutest details; but while we notice the hagioscope, we cannot forget the ill view afforded to the spectator; and admiring the intersecting aisle, its external magnificence, and the beauty of the lengthened chancel, we cannot forget that it shut in the clergy and shut out the laity. Looking to ancient monuments and matters of history, yielding ourselves to the power within us, let us only use them as incentives to action; let us view them not as worn-out customs, but that we may fashion for ourselves the outward circumstances we need.

The Dean of Winchester, Professor Whewell, and others, afterwards addressed the meeting. Dr. Plumptre took credit to the Gothic Architectural Society, at Oxford, for being the first in the field to revive a taste and knowledge of architecture amongst the clergy.

On Wednesday the cathedral and the church of St. Cross were examined, and in the evening papers were read by the Rev. J. B. Deane on the early uses of Druidical temples, Mr. E. A. Freeman on the architecture of St. Cross, and the Rev. J. L. Pettit on Romsey church.

CONTINENTAL NEWS.

As H. M. the Queen is now one of the subscribers for the rebuilding of the dome of Cologne, every thing connected with that grand conception of the middle ages becomes of still greater interest. The splendid painted glass windows, which the King of Bavaria has promised to furnish, have already been begun at Munich, by the artists intrusted with that task, Professor H. Von Hess, Inspector Ainmüller, and Mr. A. Müller. The next works in extent and beauty, which are now in hand, at the royal establishment for painted glass at Munich, are the large windows destined for the new dome of Agram, and made by order of the chapter. The three chief middle windows of the great choir have to receive these rich ornaments. The chief *picture* will represent the transfiguration of the holy Virgin, aside which will be the two patrons of Hungaria kneeling. The smaller *lunettes* around will contain various architectural ornaments. The glass paintings of the church of St. Mary, in the suburb of Munich, have been completed and placed some time ago. J. L.

Reservoir in Greenwich Park.—The authorities having given instructions to form the threatened reservoir in Greenwich-park for the purpose of supplying the hospital with water in case of fire, the work was commenced last week. Some of the residents of Greenwich look upon it as an encroachment upon the rights of the public; while others, viewing it as a necessary evil, suggest making it as ornamental as possible, and propose erecting a large oval-shaped stone basin with a fountain in the centre.

PAYMENT TO BUILDERS FOR ESTIMATING WORK NOT EXECUTED

We state the following case without comment, as we may be only partially in possession of the circumstances. Mr. C., a builder, was requested to estimate for the erection of a public-house with the understanding that the tenders would be opened in the presence of the parties. Having made his estimate and delivered it, he hears nothing more of it, but ultimately learns that the first intention has been abandoned, and that the surveyor is preparing plans for a smaller house. Thinking it unjust that he should lose his time and trouble, he applied for compensation, and was told that his tender was not the lowest, and therefore that he had lost nothing by the abandonment of the plan. Not considering himself bound to believe this, as the tenders had been opened privately, he claimed five pounds and summoned the party who employed him, to the Court of Requests on his refusal to pay it. After two hearings a verdict was given, last week, in favour of the builder, and he agreed to accept three pounds, the employer paying the builder's witness and all expenses.

LIST OF NEW PATENTS RELATING TO ARCHITECTURE, ENGINEERING, &c., GRANTED FOR ENGLAND.

Furnished by Mr. A. Prince, of the Office for Patents of Inventions, Lincoln's-inn Fields, London.

[SIX MONTHS FOR ENROLMENT.]

William Young, of Paisley, manufacturer and dyer, and Archibald McNair, of the same town, merchant, for certain improvements in the construction and means of manufacturing apparatus for conducting electricity. August 4.

Charles Henry Joseph Forret, of Lille, in France, but now of 17, Great St. Helens, Bishopsgate, gentleman, for a new and improved Archimedean screw, which he calls "Davaine's Screw." August 4.

Peter Francis Maire, of Mark-lane, merchant, for improvements in combining iron and other materials for the purpose of constructing bridges, roofs, arches, floors, and other similar structures. August 5.

Francis Taylor, of Romsey, Hants, surgeon, for improvements in giving alarm in case of fire, and in extinguishing fire. August 6.

John Evans, of Kensington, gentleman, for a new perazotic product, and its application to the arts. August 7.

Henry Smith, of Liverpool, engineer, for improvements in the manufacture of wheels for railways, and in springs for railway carriages, and in axle guards for railway carriages. August 7.

Henry Emanuel, of Pond-street, Hampstead, gentleman, for improvements in atmospheric railways. August 7.

Peter Armand Lecomte de Fontainemoreau of Skinner's-place, Size-lane, for certain improvements in apparatus for raising and supporting vessels and other floating or sunken bodies, and its application for the better preservation of life and property. August 7.

Peter Higson, of Clifton, Lancaster, mining engineer, for certain improvements in machinery or apparatus for connecting and disconnecting the steam-engine, or other motive power with or from the load, or other matter to be driven or moved. August 9.

Thomas Henry Russell, of Wednesbury, Stafford, tube manufacturer, for improvements in the manufacture of welded iron tubes. August 14.

Thomas Oxley, of Westminster-road, civil engineer, for certain improvements in constructing and propelling vessels and in the machinery connected therewith. August 22.

Mathieu Francois Isoard, of Paris for improvements in obtaining motive power. August 28.

Charing Cross Bridge.—At the half-yearly general meeting of the proprietors of this bridge (better known at present as the Hungerford Suspension Bridge), it appeared from the report of the directors, that "during the period the bridge has been opened, nearly 14,000 persons daily have used it," and that "on two or three occasions there had been between 14,000 and 15,000 persons upon it, and it remained perfectly unshaken." It is in contemplation to lease the bridge to the Central Terminus Railway Company for 186,000*l.*, the proprietors to receive half their capital in cash, and half in shares in the new company.

Correspondence.

PREVENTION OF SOUND.

Sir,—An acquaintance of mine having a machine turned by hand for cutting meat, wished to have it inclosed, to prevent it from being a nuisance, the neighbours having complained of the great noise it made. I surrounded it with 9-inch brick walls, turned an arch all over in cement, lined the inside with patent felt, making it air-tight, and placed the feet of the machine on india rubber two inches in thickness. The sound, however, is only partly prevented by these arrangements; and I should feel obliged if some of your numerous correspondents will be so kind as to inform me, through the medium of your excellent journal, the best method which can be adopted to prevent the noise altogether.

I am, Sir, &c., W. H.

Miscellanea.

The "Railway King" of France.—The "Railway King" in France, the French Hudson, is an odd-looking, but keen-observing individual, of the name of M'Kenzie. He is a great favourite of Louis Philippe, at whose numerous and promiscuously attended *soirées* M'Kenzie cuts a droll and conspicuous figure. If not a native of Liverpool, he was at no distant date a "navie" there, working—and no shame to him—in high-lows, ankle-deep at the docks in mud and clay. This gentleman, though entirely uneducated, and of brusque manners, is remarkable for his practical knowledge of engineering; and it is proved by the flattering fact, that M'Kenzie is consulted by the Government authorities of France touching the practicability of the various railway lines either in progress or contemplated; and this in preference to the engineers of Paris, who have long been celebrated for their knowledge in the science or art, for it partakes of both. M'Kenzie has a partner, named Barry, once—he may be so still—a gentleman connected with the Manchester newspaper press. These facts are highly honourable to all parties. M'Kenzie's oddity of manner and appearance present a curious contrast to that of the Parisians; *malgré*, he carries all before him, whether on the Champs Elysées, where the railway shareholders, jobbers, &c., "most do congregate," or in the gilded salons of the Tuileries. —*Liverpool Chronicle.* [The Mr. M'Kenzie named above was a considerable contractor for public works in this country for many years. He was the contractor for the Junction Dock, at Hull, and other works there. Mr. J. D. Barry, who is stated to be his partner, was, subsequently to his connection with the Manchester press, editor of the *Chester Chronicle.* —*Manchester Guardian.*

Picture Galleries.—It cannot but excite the surprise and regret of every person who has reflected on the subject, and been desirous of admiring and dwelling on finer works of art, whether pictures or sculptures, to find them placed in common rooms with several small windows directly opposite the subjects, and these windows indiscriminately facing either the east, west, north, or south; added to which disadvantages may be seen a total disregard to the colour of the walls, and to contiguous objects. After thousands of pounds have been expended on a collection, it is astonishing to find it thus sacrificed, thus immured, either in dark cells or exposed to the scorching and dazzling sun. Let us, however, hope that a better taste has commenced, and that the noble art of architecture will be liberally encouraged by the affluent, and skilfully employed by the professor to protect and adorn her sister arts.—Britton's *Illustrations of Fonthill Abbey.*

Westminster Bridge.—From 1810 to 1838 this bridge cost in repairs, 83,097*l.* 6s. 9½d. From 1838 to 1844 the amount was 82,661*l.*, and a further sum of 52,879*l.* was required for further works. The property belonging to the bridge only realizes 7,464*l.* 11s. 8d. a-year.

Malt-house Floors.—A correspondent wishes to know the best material wherewith to construct malt-house floors. Either, faced slate slabs, or a coating of Roman cement on a solid foundation, will answer the purpose.

Ornamental Chair.—A very elaborately carved Gothic chair, in the style prevalent during the fifteenth century, has recently been placed in the vicinity of the altar of our cathedral. It is worked in oak, and the most striking feature about it, at first glance, is its high back, ornamented with rich tracery, and terminated by a crocketted gable, flanked by pinnacles. At each elbow or side of the seat, is the figure of an angel bearing a shield, and on the border of frieze beneath, is a scroll containing the following inscription:—"PELLEW. DEC. NORWIC. DEO. ET ECCLIE. D.D. MDCCCXLV." This chair is for the use of the bishop, and another chair similar in general design, but differing in some of the details, has yet to be added for the dean. The chair which we have described has been executed under the superintendence of Mr. John Brown, the architect, by Mr. W. C. Vincent, a native of Norwich, but now carrying on business as an architectural carver in London. He is engaged in completing the chair for the dean, which, we understand, will be here shortly, and the effect of the two noble pieces of ecclesiastical furniture in conjunction cannot fail to be not only rich and beautiful in itself, but also such as will materially enhance the appropriate character of that portion of the sacred edifice to which they appertain.—*Norfolk Chronicle.*

Splendid Iron Bridge over the Neva.—Messrs. Bury, Curtis, and Kennedy, the celebrated engineers, of Liverpool, have received instructions from the Emperor of Russia to construct an iron bridge of powerful dimensions to be erected over the river Neva at St. Petersburgh. This river is at present crossed by three bridges of boats only, and in the winter season the damage done to them by the ice is so considerable, that it has been determined to erect the bridge in question; and it is probable at a future time the other two will be replaced by bridges of iron. The length of this bridge is 1,078 feet, and will consist of seven arches—the centre one being 156 feet span; and the three on each side, 143 feet, 125 feet, and 107 feet respectively. A separate arch at one end will be devoted to a swivel-bridge, seventy feet wide, by which vessels can be admitted to the Custom House. The total weight of iron in this enormous structure will be nearly 10,000 tons, or about five times the quantity which was employed in the famous Menai bridge; the cost of the iron alone will exceed 100,000*l.*—*Mining Journal.*

Re-opening of Coombe-Bissett Church.—The parish church of Coombe-Bissett is an interesting one to the Ecclesiologist, portions of the edifice being as ancient as the early part of the twelfth century. The interior exhibits distinct features of the Anglo-Norman and early English styles—the font being of the latter class; and these features have been preserved in the restoration which the building has undergone. Open sittings, of very substantial oak, are liberally distributed on the floor, and have been fashioned from an ancient pattern of similar seats formerly existing in the church. The new roofing is formed of polished oak, with the ancient corbel heads restored. Appropriate texts of Scripture, in the illuminated style, are placed on the walls and pulpit. The exterior repairs have also been very considerable—large portions of the walls having been entirely rebuilt. Previous to its repair, the church was in a most dilapidated condition, and afforded miserable accommodation for about 150 persons; now at least 300 may find sitting room.

Advice to Gothic Architects, by Sir Walter Scott.—In his novel of "The Pirate," in reference to the Cathedral and Earl's and Bishop's Palaces at Orkney, the author of "Waverley" remarks, that "Several parts of these ruinous buildings might be selected (under suitable modifications) as models of a Gothic mansion, providing architects would be contented rather to imitate what is really beautiful in that species of building, than to make a medley of the caprices of the order, confounding the military, ecclesiastical, and domestic styles of all ages at random, with additional fantasies and combinations of their own device, 'all formed out of the builder's brain.'"

Rise in the Price of Iron.—Several of the largest houses in South Staffordshire have issued circulars, quoting the price of bars at 20s. and pigs at 10s. in advance of the prices we recently published.

Increased Value of Land.—If proof was wanting to shew what an extraordinary increase has taken place in the value of land in this country during the last half century, we might point to the great price which the sale of each successive estate brings that is put into the market. In the "Scots' Magazine," of 1792, it is stated, that the estate of Kelly, in Renfrewshire, was sold in that year to Mr. John Wallace, for 10,750*l.* The same estate, when sold the other day, brought 65,000*l.*, although denuded of a valuable part of the shore ground, which has been retained by the late proprietor. There is no other commodity in this country which is at all to be compared to land for an increase of value, especially if that land has received proper attention in agricultural improvement similar to the estate of Kelly.—*Glasgow Chronicle.*

Jarrow Colliery Explosion.—Sir H. de la Beche and Mr. Playfair have been appointed by the executive to make a searching investigation into the causes of the explosion at Jarrow Colliery.

Tenders.

For the rebuilding of the Parochial School-rooms, Bethnal Green:—

Vargan	£2,297
Crowhurst	1,796
A. Wilson	1,597
Simmons	1,580
J. Goss	1,545
Cubitt	1,500
Smith	1,470
Charnock	1,447
Cooper	1,398
Lockwood	1,387
Geary	1,360

For the erection of a New Infirmary building to Lambeth Workhouse; Mr. W. Rogers, architect:—

Macey	£1,698
Messrs. Ward	1,673
Robson	1,590
Plaskett and Shelton	1,580
Thompson	1,550
Gerry and Son	1,534
Burtenshaw	1,529
Smith	1,525
Patrick	1,520
Barr	1,500
Cooper and Davis	1,495
Crowhurst	1,492
Mason	1,450
Cubitt	1,377
Ryder	1,300
Willson and Son	1,298
Cuttress	1,260
Wilson	1,244

Not opened in the presence of the parties; Cuttress's Tender accepted. The quantities were furnished by Mr. Marsland.

For building Six Houses and One Stable, in the Bow-road, for Mr. William Mott:—

Hill and Son	£4,180
Curton and Son	3,998
Glenn	3,622
Hawke	3,590
Ketling	3,503

For erecting School-rooms at Chatham on the British system; Mr. Edward Gotto, architect:—

Andrews	£863	14	0
Langley	728	0	0
Clements	720	0	0
Beveridge	702	0	0
Robins	685	4	7
Dadd	658	14	0
Bush	635	0	0
Foord	611	11	0
Pemble	557	10	0

All the Parties tendering, except Mr. Pemble, were supplied with the bills of quantities by the architect.

Tower Hamlets Sewers: Homerton to Clapton-square, 4 feet by 2 feet 6 inches; length, 415 feet: Church-street to Clapton-square, 4 feet by 2 feet 6 inches; length, 330 feet: total length, 745 feet:—

Curtis	£634
Livermore	617
Stewart	600
Hill	599
Crook	598

NOTICES OF CONTRACTS.

[We are compelled by the interference of the Stamp Office to omit the names of the parties to whom tenders, &c., are to be addressed. For the convenience of our readers, however, they are entered in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent-garden.]

For certain Masons', Carpenters', and Plumbers' and Glaziers' Work about to be performed in various repairs and restorations to St. Mary Redcliffe church, Bristol.

For building railway goods' waggons, ballast waggons and horse boxes, and supplying carriage couplings according to plan, for the Great Southern and Western railway (Ireland).

For the execution of Works on the Dundalk and Enniskillen railway, being a distance of ten miles.

For the execution of Works on the Leeds and Thirsk Railway.

For the execution of several lengths of Earthwork on the Aberdeen Railway. There are 5 separate Contracts, varying in lengths from 3¼ miles to 4¾ miles.

For the construction of Three Reservoirs for the Blackburn Waterworks Company: also, of Stone Culverts for conveying the water a distance of about 2¾ miles. The earthwork will amount to about 180,000 cubic yards.

For the execution of works on the Manchester South Junction and Altringham Railway, in two parts: 1, being a distance of 1¼ mile; 2, being a distance of 7¾ miles.

For the execution of Works on the Manchester and Birmingham Railway in 2 parts. 1. The Ashton Branch, being a distance of about 4¾ miles. 2. The Macclesfield branch, being a distance of about 30 chains, including a tunnel of 330 yards in length.

For the execution of that portion of the Edinburgh and Northern Railway, extending from Burntisland Pier to Kinghorn.

For supplying the Clydesdale Junction Railway Company with about 2,500 Tons of Rails, and about 600 Tons of Chairs.

For supplying the Leeds and Thirsk Railway Company with 100,000 Railway Sleepers.

For the execution of works on the East Lancashire Railway, viz., the Accrington Contract, being a distance of about 8 miles.

For the execution of that portion of the Newcastle and Berwick Railway, extending from Netherton to Tweedmouth, being a distance of about 53 miles. To be let in four contracts.

For the execution of works on the Leeds, Dewsbury, and Manchester Railway, viz., the Churwell Contract, being a distance of about 2½ miles.

For the performance of the several Works necessary in the erection of a Wesleyan Chapel at Alton, Hants.

For the execution of a portion of the Edinburgh and Northern Railway, being a distance of about 8 miles; to be estimated for in two lots.

For the execution of the Richmond Branch of the Great North of England Railway.

For supplying the Eastern Counties Railway Company with 100 Goods' Waggons, agreeably to specification.

For supplying the Eastern Union Railway Company with 8 First Class, 12 Second Class, and 8 Third Class Carriages; to run on six wheels, the gauge being 4 feet 8½ inches.

For supplying 15,000 Sleepers of Larch, 7 feet 6 inches long, and 7 feet 3½ inches at the small end; to be delivered at the Menai Bridge, Holyhead, within the next four months.

COMPETITIONS.

The Committee for the establishment of Public Parks, Walks, &c., at Manchester, offer two prizes, one of 50 guineas and the other of 25 guineas, for the best and second best set of Plans (with estimates), for the laying out, &c., of the sites already purchased by them.

APPROACHING SALES OF WOOD, &c.

BY AUCTION.

Adjoining the entrance to the East Country Dock, Rotherhithe, about 85 loads of new East-India Teak, and 60 loads of sound African Oak Timber.

On the Alderholt Park Estate, near Fordingbridge, Hants: about 500 Oak Trees, and about 100 Fir Trees; all of large dimensions.

The remaining portion of the Old British Museum, consisting of the centre building, the entrance Hall and Grand Staircase, &c.

Adjoining the Canal Bridge, Kingsland-road: a very large quantity of capital Timber in all lengths and thicknesses; 10,000 feet of 1½-inch warehouse floor-boards, &c.

BY TENDER.

In the Plantations of the Duke of Montrose, situate in the Parishes of Drymen and Buchanan, Stirlingshire: many Thousands of Larch Trees of some size, adapted for Railway Sleepers, Roofing and Joisting, and other purposes.

TO CORRESPONDENTS.

"Italian Alabaster."—*A subscriber wishes to know where the white Italian alabaster can be obtained, and what is used to give it a smooth face after it is cut with the tool.*

"A Man with many Hands."—*After Mr. Crace's distinct assertion, that not a single foreigner is or has been engaged on the decorations of the House of Lords, the question is unnecessary.*

"E. H." (Woodford).—*Complains justly of the dilapidated state of the parish church of Chingford, near Woodford, Essex. We will recur to his letter.*

"J. W." (Liverpool).—*We do not know "any institution where architecture is taught in the day time." Drawing-schools are to be found, but there is no place in which to acquire the routine of business but an architect's office.*

"A. C."—*We shall mention the new works at the Tower next week.*

"W. W." (Slough).—*Thanks for the drawing. We cannot at present promise to engrave it.*

"J. C." (Hants), *will find an answer in another page.*

"T. C." (Slough); "H. L.;" "E. N." *next week.*

Received. — "*A Constant Reader of* THE BUILDER" (*Farm Buildings*).

ADVERTISEMENTS.

A MAGNIFICENT, EXTENSIVE, and UNIQUE COLLECTION of TROPICAL FRUITS, modelled by Mons. Grimaud during his long Residence in the Isle of France, is just deposited at the ROYAL POLYTECHNIC INSTITUTION. The ATMOSPHERIC RAILWAY is lectured upon by Professor Bachhoffner, and exhibited Daily, and in the Evenings. A NEW AMERICAN INVENTION, COLEMAN'S PATENT LOCOMOTIVE ENGINE for ascending and descending inclined planes on Railways without the aid of stationary power. SWIMMING and DIVING ILLUSTRATED by the Son of Capt. Stevens, the celebrated teacher of Swimming, on Mondays, Wednesdays, and Fridays, at Two o'Clock, and on the Evenings of Tuesdays and Thursdays, at half-past Eight o'clock. The other Exhibitions, &c., as usual.—Admission, One Shilling; Schools, half-price.

PATENT OFFICE, 5, CHANCERY-LANE, NEAR FLEET-STREET.

INVENTORS requiring protection by LETTERS PATENT should apply direct to the PATENT OFFICE, as above, where Patents can be speedily procured for the United Kingdom, &c., and by which a great saving of expense will be effected. CAVEATS are entered at this office, fee 1*l.* 1*s.* DESIGNS of all kinds are REGISTERED. Apply at the PATENT OFFICE, 5, Chancery-lane, near Fleet-street.

NOTICE TO INVENTORS.

OFFICE FOR PATENTS OF INVENTIONS and REGISTRATIONS of DESIGNS, 14, Lincoln's-inn-fields.—The printed INSTRUCTIONS gratis, and every information upon the subject of PROTECTION for INVENTIONS, either by Letters Patent or the Design Acts, may be had by applying personally, or by letter, prepaid, to Mr. ALEXANDER PRINCE, at the office, 14, Lincoln's-inn-fields.

PRIZES IMPORTANT TO INVENTORS AND PATENTEES.

A GOLD MEDAL, value 100*l.* and a SILVER MEDAL, value 50*l.*, will be given by Mr. M. JOSCELIN COOKE. The Gold medal for the best Patent, and the Silver medal for the best Design taken out or Registered at the OFFICE for PATENTS and DESIGNS, 20, Half-Moon-street, between the 1st of November, 1844, and the 1st of June, 1846. The Prizes will be awarded by competent judges on the 10th June, 1846. The conditions to be observed, together with instructions, charges, and every information for obtaining Patents in England or Foreign Countries, or Registering Designs, will be forwarded gratis, on application to Mr. M. JOSCELIN COOKE, at the Office for Patents and Registration of Designs, 20, Half-Moon-street, Piccadilly, London.

VARNISH.—It has long been a desideratum amongst the consumers of Varnish to obtain a good and genuine article; brilliancy, facility of drying, hardness, and durability are the qualifications necessary, but these are seldom if ever found united. The experience of a life-time devoted exclusively to the manufacture of this article, the great and important discoveries of modern chemistry, and the daily improvements in machinery, have enabled Messrs. George and Thomas Wallis to produce Varnishes (both oil and spirit) unrivalled in every respect, and they confidently recommend them to the trade, as deserving of notice both in price and quality.

Builders, Coachmakers, Painters, and others may depend on being supplied with a genuine and unadulterated article. Fine Oil Varnish, from 10s. per gallon; best White Spirit Varnish, 21s. ditto; Best Spirit French Polish, 20s. ditto; White Lead, Oil, Turps, and Colours of every description at the very lowest prices.—WALLIS'S Varnish, Japan, and Colour Manufactory, 64, Long-acre, one door from Bow-street. Established 1750.

WALLIS'S PATENT LIQUID WOOD KNOTTING. — This newly-discovered Liquid Composition which Messrs. Geo. and Thos. Wallis have the satisfaction of introducing to the trade, possesses the important qualification of effectually stopping Knots in Wood, however bad, and preventing them eating through and disfiguring the paint above.

Many substances have been used and much time spent in endeavouring to find a cure for a bad Knot, but hitherto without success. Messrs. Wallis therefore feel much pleasure in offering to the public an article so long and anxiously called for.

In the application, skill is not required; a boy can use it as well and effectually as the best workmen: it is put on to the work with a brush like common paint, can be used in all climates and situations, and does not require heat.

Sold wholesale and retail, by Messrs. G. and T. Wallis, Varnish, Japan, and Colour Manufacturers, No. 64, Long Acre. Price 20s. per gallon.

TO ENGINEERS, ARCHITECTS, AND CONTRACTORS.

GREAVES'S LIAS CEMENT and GROUND BLUE LIAS LIME, at 2, South Wharf, Paddington, London, and Works, Southam, Warwickshire.

Agent for Liverpool, Mr. WYLIE, 56, Gloster-street; ditto for Manchester, Mr. J. THOMPSON, Back King-street; ditto for Chester, Mr. J. HARRISON, Linen Hall-street.

ATKINSON'S CEMENT.—The public is respectfully informed, that the price of this very excellent Cement, which has now been in use for Architecture and Engineering works upwards of thirty years, is reduced to 2s. 3d. per bushel, and may be had in any quantity at Wyatt, Parker, and Co.'s Wharf, Holland-street, Surrey side of Blackfriars-bridge.

N.B.—This Cement being of a light colour, requires no artificial colouring or painting, and may be used for stucco with three parts its own quantity of sand.

MARTIN'S PATENT CEMENT.
TO ARCHITECTS, BUILDERS, AND PAINTERS IN FRESCO.

STEVENS and SON, PATENTEES and SOLE MANUFACTURERS, beg respectfully to announce that this beautiful Cement has now arrived at a degree of excellence far surpassing their most sanguine expectations. For all internal work it possesses a great superiority over every article hitherto in use; it is now being used extensively by Government in the British Museum and other public buildings. IT DOES NOT THROW OUT ANY SALT, but presents a beautifully plain and perfect surface, which may be painted upon dry work within four days without peeling. It is equally applicable for walls or lath, for mouldings, architraves, skirting, or flooring; and is admitted to form the best ground for fresco painting, having been used for many of the prise frescos lately exhibiting in Westminster Hall. It will bear an intense heat without cracking, and for hardness, durability, and economy, cannot be equalled.

186, DRURY-LANE, LONDON.

Agent for Liverpool and Manchester, Mr. R. Part, 11, Atherton's-buildings, Dale-street, Liverpool.

KEENE'S PATENT MARBLE CEMENT.—The Patentees of this composition beg to refer to the British Museum, the Royal Exchange, the new works at Bethlem Hospital, Greenwich Hospital, and the Coliseum in the Regent's-park, as buildings finished or in progress, in which Keene's Cement has been used as an internal stucco. Its superiority to common plastering consists in its extreme hardness, and the rapidity with which it dries, which qualities fit it to receive paint or other finishing sooner than other water Cement.

When employed for skirtings, architrave, and other mouldings, in place of wood, it checks dry-rot, is impervious to vermin, prevents the spread of fire, and is more economical in its application than the material for which it thus becomes the substitute.

Confirmation of these statements is to be found in the almost universal adoption of Keene's Cement for Skirting and Hall flooring in the new houses on the Hyde Park Estate, where its application is to be seen to the fullest advantage.

In Liverpool and Manchester, Keene's Cement has in several cases been used for the covering of the fire-proof warehouse floors, where its lightness and hardness give it the preference over tiles and flagging, which are much heavier, and necessarily leave the floor intersected with numerous joints, whilst Keene's Cement is laid down in one unbroken surface.

The high polish and marble-like hardness of which this Cement is susceptible render it the most suitable material for the manufacture of Scagliola.

Patentees, J. B. WHITE & SONS, Millbank-street, Westminster, Manufacturers of Roman and Portland Cement.

Depôt in Liverpool, 26, Seel-street; James Woods, Agent.

TO ARCHITECTS, ENGINEERS, CONTRACTORS, BUILDERS, MASONS, AND PLASTERERS, MERCHANTS, SHIPPERS, AND THE PUBLIC IN GENERAL.

JOHNS and CO.'S PATENT STUCCO CEMENT.—The following are the positive advantages possessed by this Invention over every Cement hitherto introduced:—It will effectually resist Damp. It will never vegetate nor turn green, nor otherwise discolour. It will never crack, blister, nor peel off. It will form a complete Stone casing to any Building covered with it. It so closely resembles Stone that it is impossible to detect it. It never requires either to be painted or coloured. It will keep fresh and good in the cask in any Climate for any number of years. It is the only Cement that can be depended upon for export. It is the only Cement that can be used with confidence by the Sea-side. It may be used in the hottest or coldest Climates at any season. It will adhere to any substance, even to Wood, Iron, or Glass. It will carry a larger Proportion of Sand than any other Cement. It matures by age, and becomes perfect when other Cements begin to perish. It may be worked through the Winter, as frost has no effect upon it. It may be used on the Inner Walls of new Houses, which may be papered over or painted directly. Roofs laid or pointed with this Cement will remain undamaged by the severest Storms. Any Plasterer may apply it, the Instructions for use being very clear and distinct. The first cost of this material does not exceed that of the cheapest Cement now in use; but with all the above-named extraordinary and valuable advantages, nothing can approach it in point of economy.

Architects and Builders who have used this Cement have declared that it requires only to be known, to be universally preferred.

Specimens may be seen, and a Prospectus fully describing the Cement and its mode of application, together with a volume of Testimonials from every part of the Kingdom, may be obtained on application to MANN and CO., SOLE AGENTS for the Patentees, 5, Maiden-lane, Queen-street, Cheapside, London: of whom also may be had,

JOHNS and CO.'S PATENT STONE-COLOUR STUCCO PAINT, expressly intended for Painting over exterior Walls of Houses that have been covered with Roman or other Cements, and which have become dirty and discoloured. It is in every way better suited for this purpose than White Lead Paint, which will frequently come off in flakes, being in direct chemical opposition with Cement; whereas MESSRS. JOHNS and CO.'S PATENT PAINT having an affinity for Stucco, binds itself with it, stopping the suction, thereby rendering the wall proof against weather, and in the finish producing a pure stone-like effect, produceable by no other Paint whatever. It is cheap in its application,—and may be used by any Painter, in any climate, even in the most exposed Marine situations.